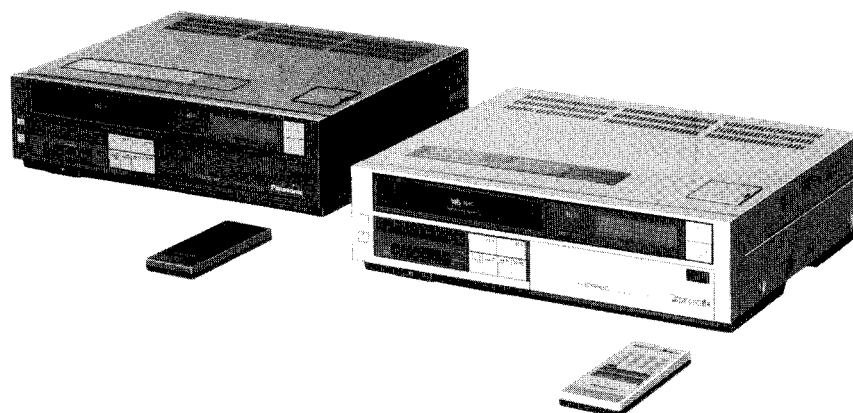


Service Manual

General Description
Adjustment Procedures
Block/Schematic Diagrams
Exploded Views/Parts List

Video Cassette Recorder
Panasonic **VHS** **Hi-Fi**
NV-850 ^{-E} ^{-EG} _{-B}



SPECIFICATIONS

Power Source: 220 V AC 50/60 Hz (NV-850-E/-EG)
 240 V AC 50/60 Hz (NV-850-B)

Power Consumption: Approx. 38 watts

Television System: CCIR: 625 lines, 50 fields
 PAL colour signal
 CCIR: 625 lines, 50 fields

Video Recording
 System: 2 rotary heads, helical scanning system
 Luminance: FM azimuth recording
 Colour signal: converted subcarrier phase shift recording

Audio Track: 1 track (Normal), Hi-Fi 2CH

Tape Format: Tape width 12.7 mm high density tape

Tape Speed: 23.39 mm/s

Record/Playback Time: 240 min. with NV-E240

FF/REW Time: Less than 5.5 min. with NV-E180

Heads: Video: 3 rotary heads
 1 pair for video normal recording and playback (R-L Head)
 1 pc. of head for video trick play with L head (field still)

Audio: 1 pair for audio Hi-Fi recording and playback (AR-AL Head)

Audio/Control: 1 stationary head

Erase: 1 full track erase

Input Level: Video: VIDEO IN connector (BNC)
 1.0 Vp-p, 75 Ω terminated
 AV jack (DIN 45482:
 NV-850-E/-EG) 1.0 Vp-p,
 75 Ω terminated

Audio: LINE IN jack (Phono jack) $\times$ 2
 More than -20 dB, 50 k Ω
 AV jack (DIN 45482:
 NV-850-E/-EG) More than
 -10 dB, 10 k Ω MIC (M6) -70 dB,
 More than 3.9 k Ω

TV Tuners: VHF CH2 ~ CH12 (NV-850-E/-EG)
 UHF CH21 ~ CH69

Output Level: Video: VIDEO OUT connector (BNC)
 1.0 Vp-p, 75 Ω terminated
 AV jack (DIN 45482:
 NV-850-E/-EG) 1.0 Vp-p,
 75 Ω terminated

Audio: LINE OUT jack (Phono jack)
 -8 dB, less than 1 k Ω
 AV jack (DIN 45482:
 NV-850-E/-EG) -8 dB, less than
 1 k Ω HEADPHONE jack
 -34 dBV max, 8 Ω

RF Modulated: UHF CH36 $\pm$ 4
 73 $\pm$ 3 dB μ 75 Ω unbalanced

Weight: 9.6 kg

Dimensions: 430(W) $\times$ 115(H) $\times$ 370(D) mm

Accessory Supplied: 1 pc. DIN-RF Cable
 1 pc. Video Cassette Tape
 1 pc. Wireless Remote Controller,
 2 pc. Audio Cable

Optional Accessories: Video cassette tape:
 NV-E240 Approx. 344 m, 240 min.
 NV-E180 Approx. 258 m, 180 min.
 NV-E120 Approx. 174 m, 120 min.
 NV-E60 Approx. 88 m, 60 min.

Weight and dimensions shown are approximate.
 Specifications are subject to change without notice.

Panasonic

Matsushita Electric Trading Co., Ltd.
 P.O. Box 288, Central Osaka Japan

INTRODUCTION

This service manual contains technical information which will allow service technicians to understand and service the PAL VHS Hi-Fi Video Cassette Recorder Model NV-850E/EG/B.

The NV-850E/EG/B has many special features as shown in page 1-1.

These features in addition to the basic PAL VHS Format make the unit an ideal one for your culture and entertainment.

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REMARKS: NV-850EG West Germany model only

This set can be used for special recording/playback of SECAM colour signal.

SECAM tapes which have been recorded on specified SECAM-VHS recorder can be played back in black-white on this set.

SECTION 1

GENERAL DESCRIPTION

1-1. FEATURES

1. Hi-Fi Sound System

The revolutionary new Panasonic developed Hi-Fi sound recording system features two rotary audio heads arranged on the video head cylinder, while maintaining the conventional stationary audio head for compatibility with the standard VHS system. This new rotary audio head configuration increases the relative tape/head speed, thus making it possible to record a far greater amount of signal information on the tape.

In addition, the hi-fi sound system employs an FM conversion recording method, and the audio and video signal processing circuits are completely separate. The result of this innovative system is superb sound quality with a dynamic range of 80dB, flat frequency response from 20Hz to 20kHz and 0.005% wow and flutter.

2. Playback of Prerecorded Stereo Video Cassette Tapes

The new hi-fi audio system of this VTR allows playing back video tapes of concerts, etc. in stereo with the same outstanding sound quality, that you would get from a high-end audio cassette deck, but with the tremendous added advantage of being able to watch your favourite orchestra, singer or actor and actress in action in brilliant colours.

3. Use as a High-Quality Audio Cassette Recorder

The excellent audio quality, outstanding tape economy, continuous 4-hours recording capability, audio recording level control, FL audio level meters and convenient tape programme search system make this VTR ideal for use as a top-quality audio cassette recorder.

4. 14-day/8 Programme Timer

The built-in timer allows automatic absentee recording of up to 8 TV programmes within 14 days. It is also possible to record a programme which is broadcast at the same time every day or every week.

5. Tape Programme Search System

By pressing the Audio Rec Mute Button for at least 4 seconds at the beginning of every recording, this tape programme search system enables fast and automatic locating of the next start of a programme in forward or reverse direction. As soon as the beginning of the programme is found, playback will start immediately. Locating a desired programme or scanning through a whole tape to check the content is perfectly easy and fast.

6. Slim Design and Front Loading System

This highly functional design allows loading the video cassette from the front, thus minimizing the space required for the placement.

7. Multi-Function Display

Whenever an operation button is pressed, the activated function is immediately indicated on this easy-to-see display. It shows you at a glance, in what operation mode the VTR is.

8. One-Touch Timer Recording (OTR)

Simply by pressing the OTR Button between 2 and 5 times, the VTR can be programmed for 30, 60, 90 or 120 minutes of recording with immediate start.

9. Standby OTR Recording

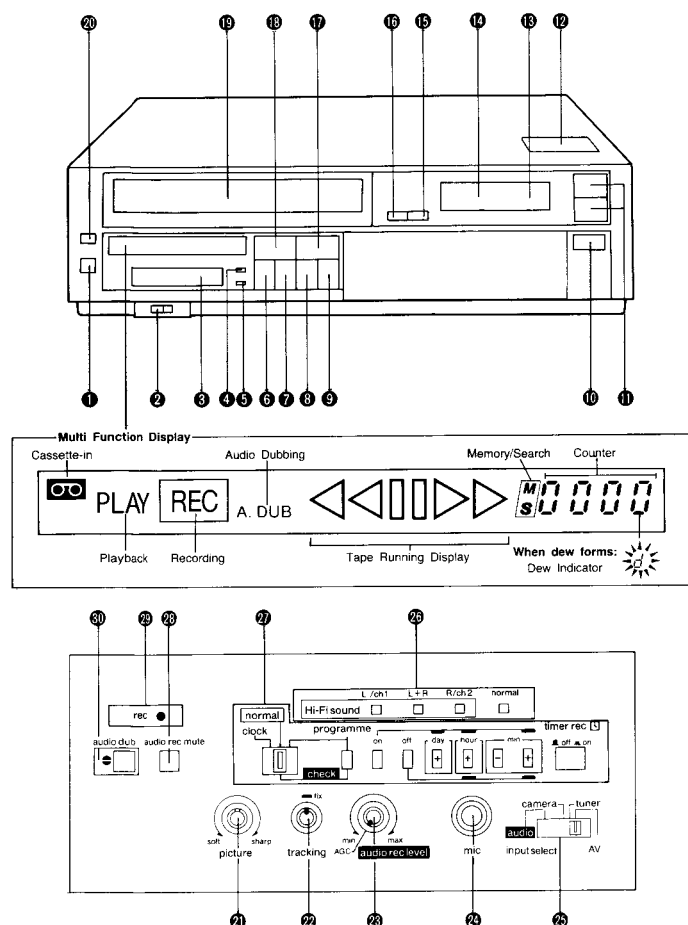
By pressing the Standby Button between 1 and 4 times, the VTR can be programmed to begin recording in 30, 60, 90 or 120 minutes. By subsequently pressing the OTR Button repeatedly, a recording duration of 30, 60, 90 or 120 minutes can be selected for this delayed OTR recording.

10. Infrared Remote Control

The wireless infrared remote control unit allows operating the following functions from the comfort of your favourite viewing position: • VTR ON/Off • Record • Play • Pause/Still • Still Advance • Cue • Review • Fast Forward • Rewind • Direct Channel Selection.

1-2. CONTROLS AND COMPONENTS

TOP AND FRONT



1 VTR ON/OFF Switch

2 Audio Level Meter Selector Switch

Selecting this Audio Level Meter Selector Switch, the Audio Level Meter (3) display the audio recording level or condition of the Hi-Fi audio tracking.

3 Audio Level Meter

4 Reset Button

Push the reset button to reset the Counter of Multi-Function Display to "0000".

5 Memory/Search Button

If you want find a certain tape position again later, reset the tape counter at that point and press the "memory/search" button once.

During Rewind or Fast Forward, the tape will stop automatically at the tape counter position "0000".

The convenient Tape Programme Search function of this VTR locates blank spaces in the audio track (that mark the beginning of the programmes) during Cue or Review playback. As soon as the next blank space is reached, the recording starts automatically if the search was started from the playback mode. If it was started from the still mode, it will be stopped in the still mode.

1. Press the "audio rec mute" button (28) more than 4 seconds during recording to mark the beginning of a programme.

2. Press memory/search Button twice, then "S" appears on the Multi-Function Display.

3. Press the Play Button (17) (or the Playback and Pause/Still Buttons).

4. Press the Rewind/Review (8) or Fast Forward/Cue Button (9) to start the tape programme search function.

The tape programme start without sound reproduction will start.

6 Pause/Still Button

Push to temporarily stop the tape during recording in order to avoid recording unwanted material, or to view a paused picture during playback. Push again to release the tape from pause.

7 Still Advance Button

During pause mode, press the Still Advance Button. Each time you press this button, the still-picture will advance one single frame. A slow motion effect with noise is obtainable by holding down the Still Advance Button (about 1/6 speed of normal playback).

8 Rewind/Review Button

Push to rewind the tape.

When this button is pressed during playback, the picture can be scanned in reverse at 5 times normal speed. Review will continue as long as the button is depressed.

9 Fast Forward/Cue Button

Push to fast-forward wind the tape.

When this button is pressed during playback, the picture can be scanned will play back at 5 times normal speed. Cueing will continue as long as the button is depressed.

10 Infra-red Remote Control Receiver

Receives the signal from the Infra-red Remote Control.

11 Channel Selection Up and Down Buttons

Push the desired channel selector buttons to select the channel you wish to view or record.

12 Tuner Set-up Controls

Used to tune to any broadcast channel in your area.

13 Channel Display

14 Time Display

Indicates either the time and day or recording start/stop times for the timer recording.

15 OTR Button

Automatic recording for 30, 60, 90 or 120 minutes is possible by pushing this button.

16 Stand by Button

OTR recording can start after a delay of 30, 60, 90 or 120 minutes.

1. Select the TV channel to be recorded.
2. Press the "stand by" Button repeatedly to select the time delay.
The "stand by" indication will flash.
3. Press the OTR Button repeatedly to select the desired recording duration.
 - After selecting time delay for the OTR recording start in step 2, the OTR Button must be pressed within 8 seconds to select the OTR recording duration, otherwise the selected delay will be cancelled.

17 Play Button

Push to play back a recorded tape.

18 Stop Button

Push to stop the tape.

19 Cassette Holder

20 Eject Button

Press this button to remove the cassette.

21 Picture Sharpness Control

The picture sharpness control enables the playback picture to be adjusted so that its outlines are made sharper or softer.

It has no effect when recording.

22 Tracking Control



Noise Picture

If the sound is not satisfactory during playback of a cassette tape that was recorded on another Hi-Fi video recorder, set the Level Meter Selector Switch (2) to 'Hi-Fi tracking' and adjust for optimum sound reproduction by slowly turning the Tracking Control while watching Audio Level Meter (3).

23 Audio Rec Level Control

Set the Audio Level Meter Selector Switch to "audio level" and adjust the audio rec level control while watching the level meters. (It is recommended to adjust so that peaks in the audio level reach about +6dB.) When the Audio Rec Level Control is set to the AGC position, the recording level is automatically adjusted.

24 Microphone Input Socket

For connecting a microphone.

25 Input Signal Selector

For selecting the input signal to be recorded.

CAMERA: To make a recording with using a video camera which is connected to the Video Input Jack and the Audio Input Jack.

TUNER: To record a TV programme with the built-in tuner of the VTR.

AV: To record and playback when using the AV connection.

AUDIO: To record and playback the audio signal when using the NV-850 as a Hi-Fi and TV recorder.

26 Sound Track Selector

Press the sound selector button for the desired sound mode, as shown below. If no sound selector button is pressed, the sound from the normal sound track (always in mono) will be played back.

L/ch1 Left

L+R L+R

R/ch2 Right

normal.....Mono (normal)

27 Timer Controls

The timer controls are used to set the clock for the present time and to programme start and stop for timer recording.

28 Audio Rec Mute Button

Push the Audio Rec Mute Button when indexing the tape for tape Program Search, refer to the description of the Memory/Search Button (5).

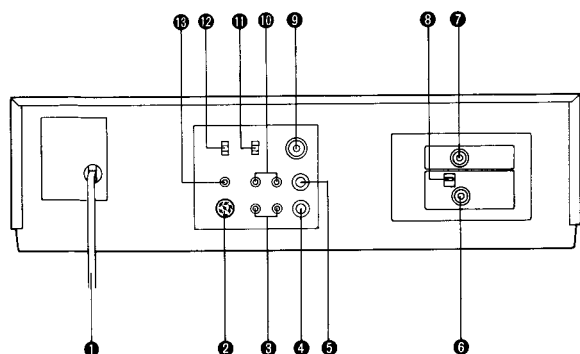
29 Record Button

Push together with Play Button to start recording.

30 Audio Dubbing Button

When audio dubbing, the input audio signal is recorded on only the "normal" (mono) sound track.

REAR



① AC Mains Cord

② AV Socket

Central connecting socket for recording and playback of picture and sound. Connection for TV sets which are also equipped with a central AV socket. Via this socket TV programmes can be recorded, too. Such a connection improves the picture and sound quality during playback.

③ Audio Output Socket

For connecting an audio cable of a TV monitor, a component audio system, or another VTR.

④ Video Output Socket

For connection to a TV monitor or another Video Cassette Recorder. Not used with an ordinary TV.

⑤ Video Input Socket

For connecting the video cable of a video camera or an output video signal of another VTR.

⑥ RF Input Socket

Connect the external aerial, which is now connected to the TV set, to this socket.

⑦ VTR RF Output Socket

For connection to the antenna terminal (COAXIAL type) of TV with the DIN-DIN Coaxial Cable supplied with the unit.

⑧ RF Signal Level Switch

Used to attenuate the reception of the VHF and/or UHF antenna signals.

If the reception is normal, set to "HIGH". If the signal strength is high and a stripped pattern appears at the top of the picture on TV, set to "LOW".

⑨ Headphone Socket

⑩ Audio Input Socket

For connecting an audio cable of a video camera, a component audio system or another VTR.

⑪ Headphones Output Level Switch

When using headphones, volume level can be changed by using the Headphones Output Level Switch.

Adjust the audio level by turning this control to "LOW"—"HIGH".

⑫ Colour Mode/Test Signal Switch

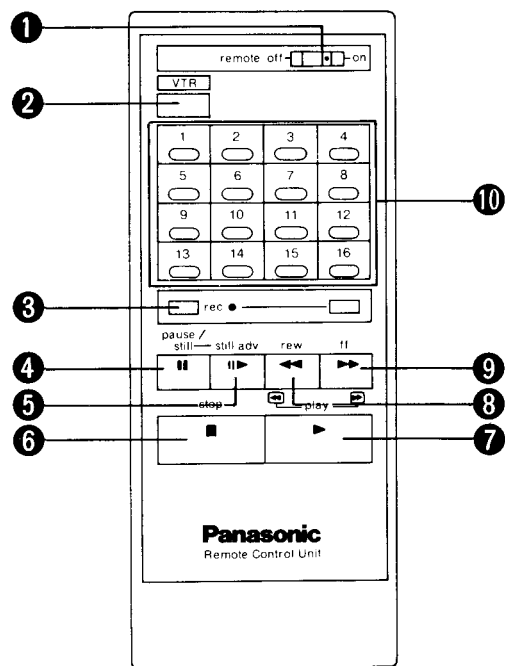
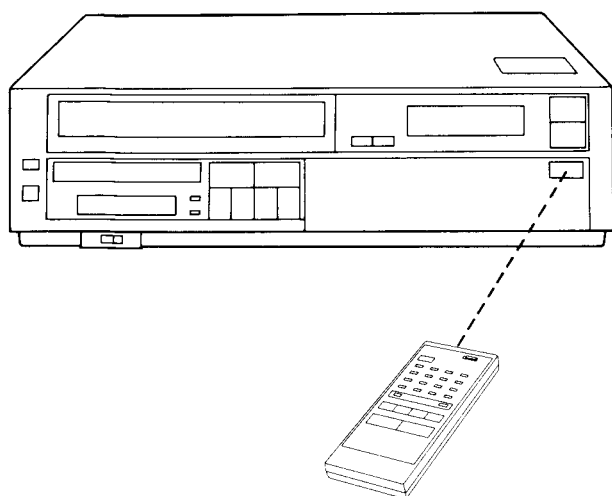
In the TEST position, a black-and-white test pattern is generated, which allows easy tuning of your TV set to the video playback channel of the VTR. For normal recording and playback operation, this switch must be in the middle AUTO position.

Only if the colour reception of a station is particularly weak, setting this switch to the COLOUR position can improve the recording quality.

⑬ Camera Remote Control Socket

For connecting the remote control cable of a video camera (optional).

INFRARED REMOTE CONTROLLER



1. Remote on/off Switch

2. VTR on/off Button

3. Rec Buttons

To start recording, press the two buttons simultaneously.

4. Pause/Still Button

5. Still Adv Button

6. Stop Button

7. Play Button

8. Rewind/Review Button

When this button is kept depressed during playback, the VTR changes over to the Review playback mode.

9. Fast Forward/Cue Button

When this button is kept depressed during playback, the VTR changes over to the Cue playback mode.

10. Channel Selector Buttons

Note:

Infrared beam should be transmitted directly to the VTR. Direct sunlight may interfere with the beam.

- The light sensing angle of the infrared reception window in the VTR is about 60°.
- The unit should be used within a range of about 7 meters from the front to the VTR.

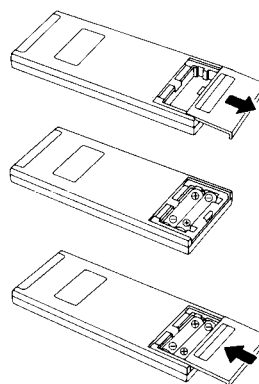
Power Source of Infra-red Remote Controller

- The infra-red Remote Controller is powered by two IEC "R03" size batteries. The life of the batteries is about one year, however, it depends on the frequency of use. Inspect and if necessary, replace the batteries once a year.

BATTERY REPLACEMENT CAUTION

- Load the new batteries with their polarities (⊕ and ⊖) aligned correctly.
- Do not heat, disassemble or short-circuit the old batteries.
- If you do not intend to use the remote controller for a long period of time, remove the batteries and store them in a cool and dry place.
- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new battery together. (Also never use an alkaline battery with a manganese battery.)

Load the batteries as follows:



1. Remove the Battery Compartment lid.
2. Place two batteries in the Battery Compartment as indicated inside the Battery compartment.
3. Replace the lid.

SECTION 2

ADJUSTMENT PROCEDURE

2-1. MECHANICAL ADJUSTMENT PROCEDURES

The model NV-850 uses the D-1 Mechanical Chassis. Therefore, please refer to the Service Manual D-1 Chassis(Order No. VRD-8310-490) for the main mechanical adjustments.

2-1-1. DISASSEMBLY FLOWCHART

This flowchart indicated disassembly items of the cabinet parts and P.C. Boards in order to find the item(s) necessary for servicing. When reassembling, perform the step(s) in the reverse order.

Note:

When removing the Front Panel, Work with care not for breaking the locking portion of the panel.

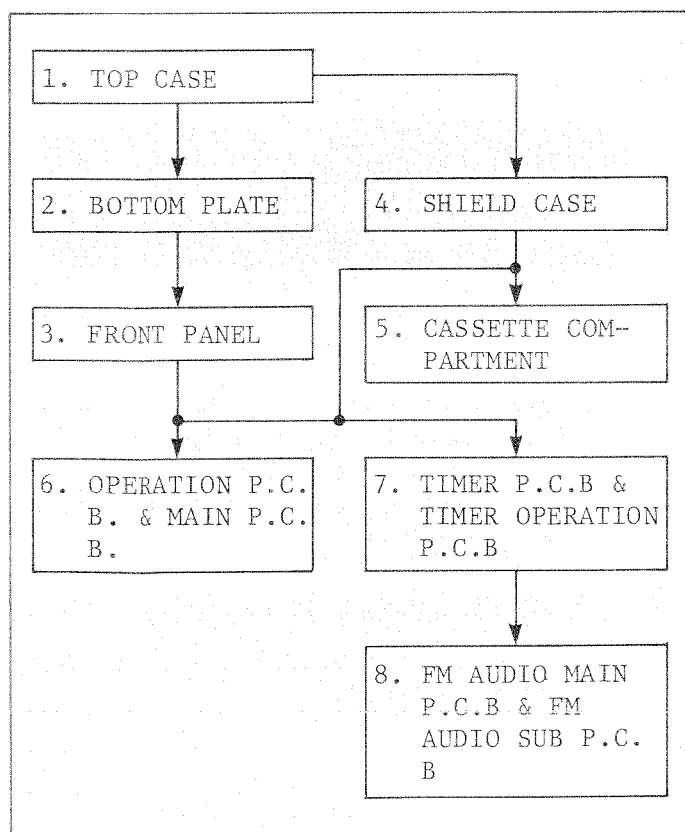


Fig. 1

2-1-2. DETAILED DISASSEMBLY METHOD

1. Removal of Top Case
Unscrew 4 screws (A). Then carefully lift the rear of the case to remove.

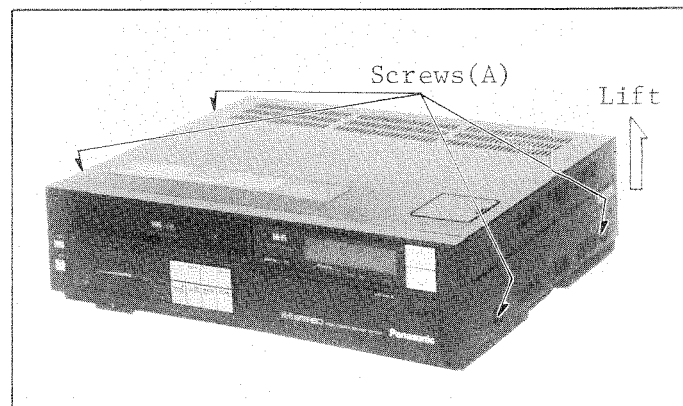


Fig. 2

2. Removal of Bottom Plate
Place the deck up side down so the bottom side face up ward. Then unscrew 9 screws (B) to remove.

Note:

Place the cushion under the deck for not being damaged the top portion of the deck.

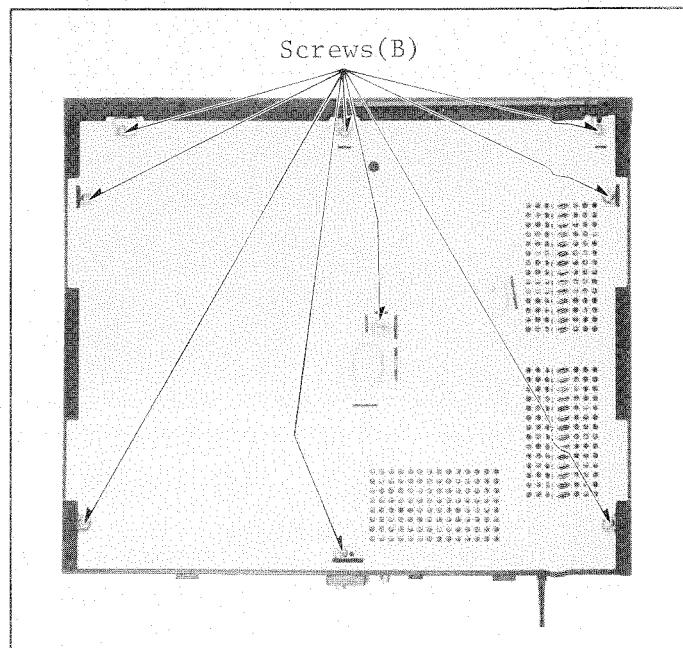


Fig. 3

3. Removal of Front Panel

Remove 3 screws (C) and unlock the 6 locking portions (D). Then hold the top portion of the panel and turn it toward the front of the deck to remove.

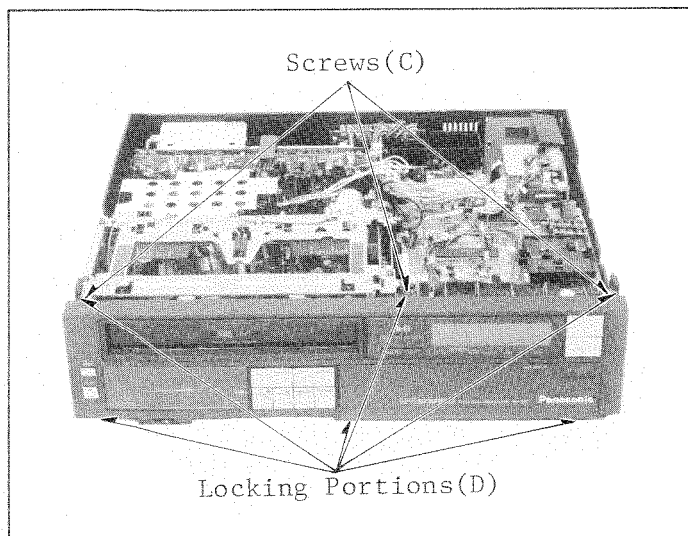


Fig. 4

4. Removal of Shield Plate

Loosen 5 screws (E) and remove the Shield Plate.

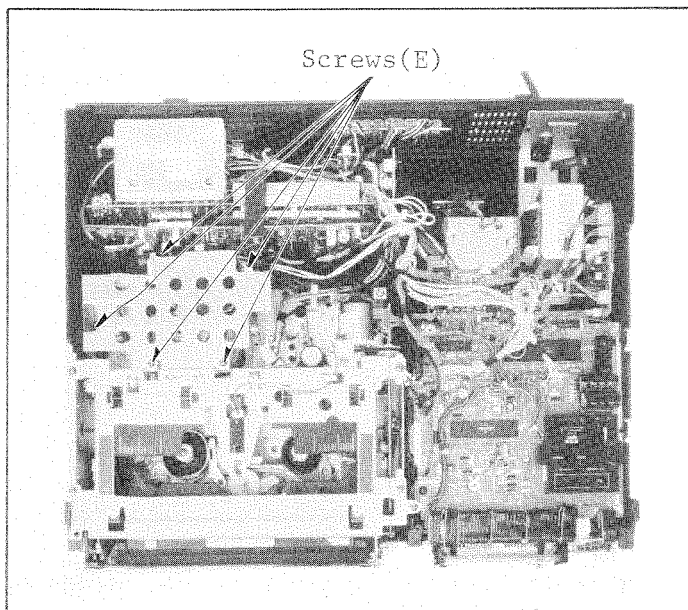


Fig. 5

5. Removal of cassette compartment

Disconnect the connector P1507 from the Front Loading Motor Connection P.C. Board, and unscrew 5 screws (F). Then carefully pull out the Cassette Compartment.

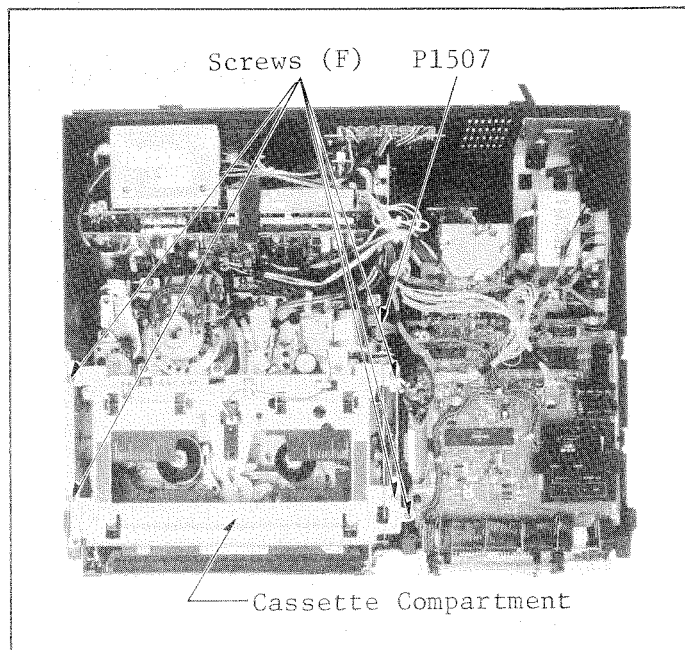


Fig. 6

6. Opening of the Operation P.C. Board and Main P.C. Board with the Head Amp & Luminance (2) P.C. Board.

(1). Unscrew 2 screws (G), and remove the Operation P.C. Board.

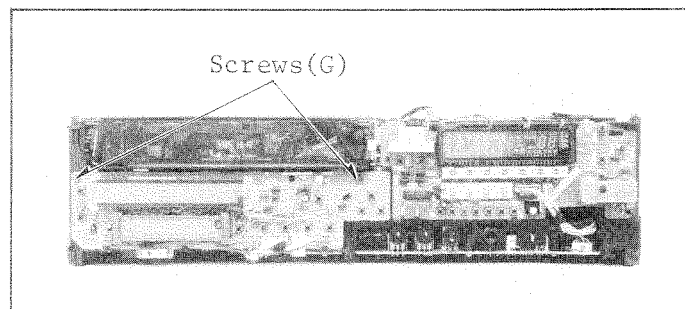


Fig. 7

(2). Unscrew 8 screws (H), and carefully unlock the 2 locking tabs (I). Then open the Main P.C. Board and the Head Amp & Luminance (2) P.C. Board.

Note: Remove the Operation P.C. Board before opening the Main P.C. Board and the Head Amp & Luminance (2) P.C. Board.

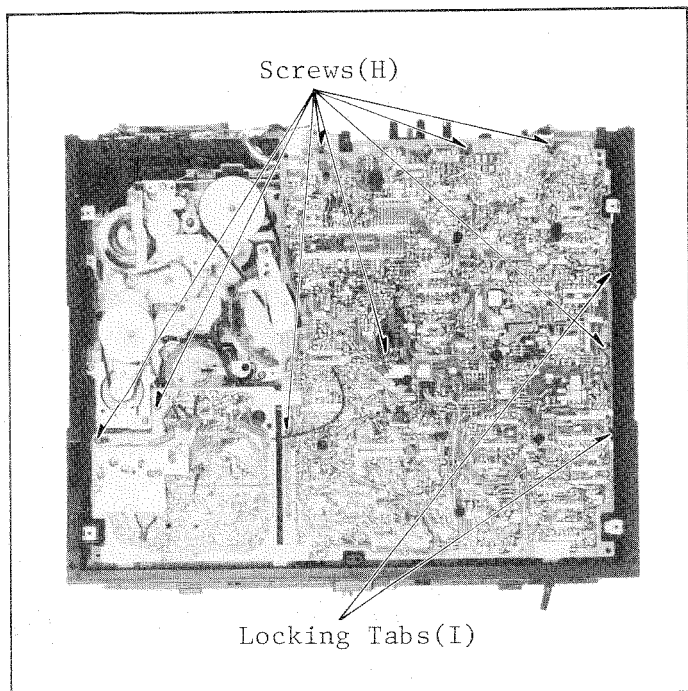


Fig. 8

7. Opening of the Timer P.C. Board and the Timer Operation P.C. Board.

- (1) Unscrew the screw (J) to remove the earth lead, and then pay attention to short the circuit by the free lead touching the active circuit.
- (2) Remove the connector wires from the Wire Hinge and clampers, and unlock the 4 locking tabs (K).
- (3) Turn the Timer P.C. Board toward the front side of the deck till the 2 Locking portions (L).

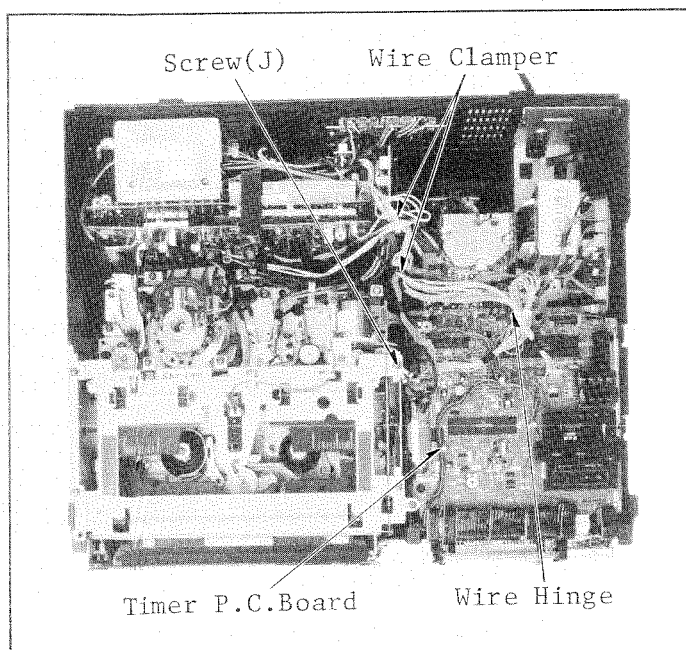


Fig. 9

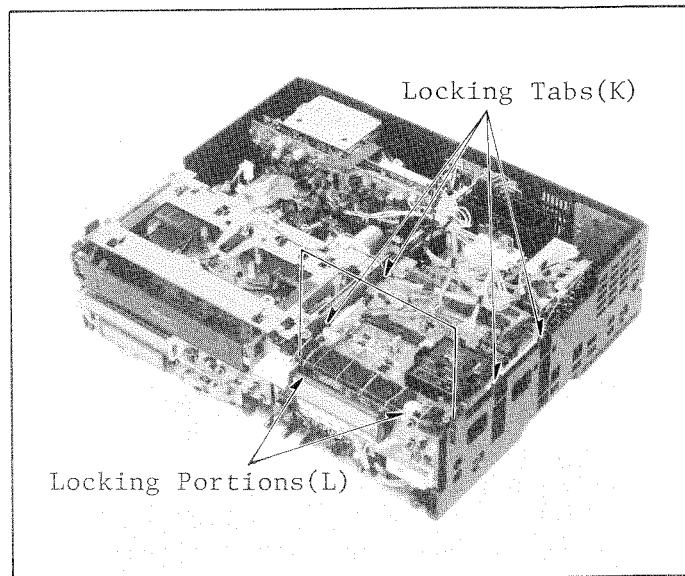


Fig. 10

- (4) Next, hold and pull out the 2 Locking Tabs (M), and open the Timer P.C. Board and timer Operation P.C. Board.

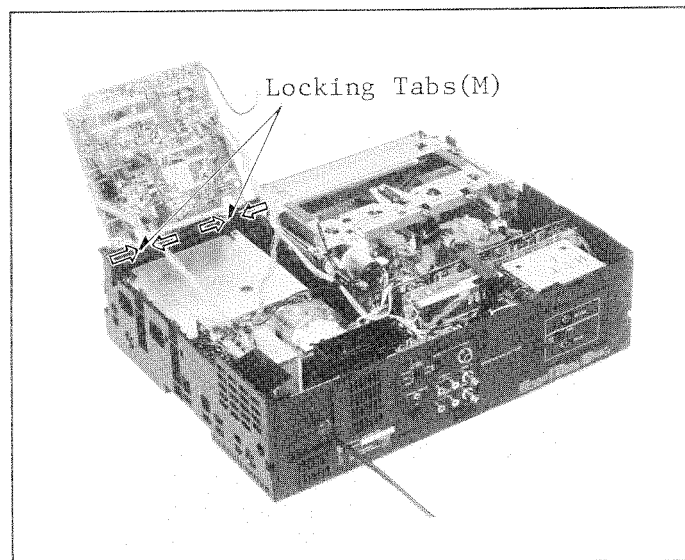


Fig. 11

8. Opening of the FM Audio Main P.C. Board and the FM Audio Sub P.C. Board.

- (1) Unscrew 3 screws (N) and unlock the Locking Tab (O), and turn to open the FM Audio Main P.C. Board and the FM Audio Sub P.C. Board.

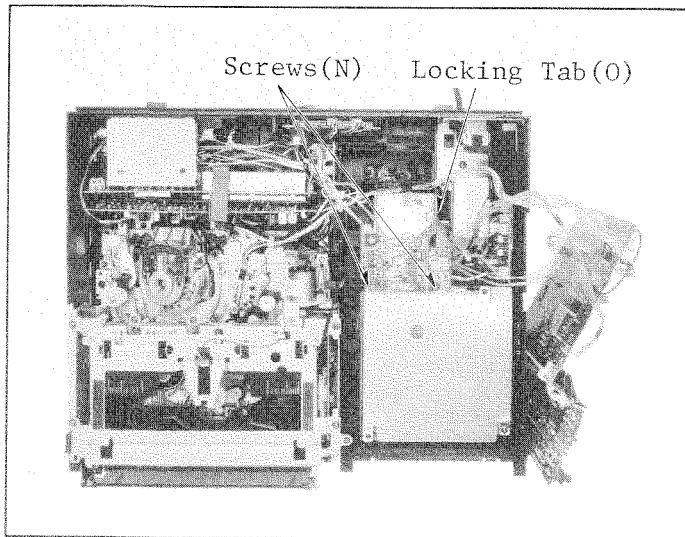


Fig. 12

2-1-3. REPLACEMENT PROCEDURE FOR STATOR ANGLE, RT ROTOR BASE, AND UPPER CYLINDER

REMOVAL PROCEDURES

1. STATOR ANGLE

First, unscrew 2 screws (A) and then remove the Stator Angle as shown in Fig. 13.

Note: Be very careful to remove the Stator Angle so that it won't directly come into contact with lead wires alongside and the video head as well. Never touch the Rotary Transformer and screws(E) that secure the Stator Base. If screws (E) are removed, the properly adjusted height of the Stator Base will vary.

2. RT ROTOR BASE

First, unscrew 2 screws (B), and then unsolder 4 of the soldered portions connecting the RT Rotor Base and the Upper Cylinder, and finally remove the RT Motor Base.

3. UPPER CYLINDER

Unscrew 2 screws (C) and unsolder 8 of the soldered portions indicated by arrows on the Upper Cylinder, and finally remove the Upper Cylinder.

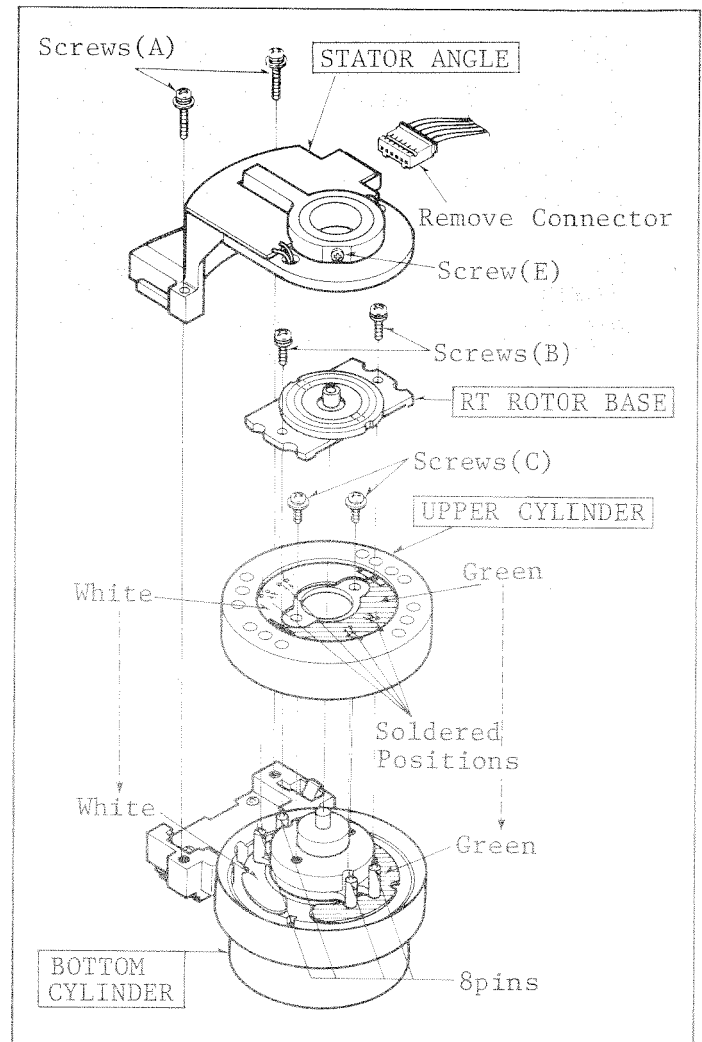


Fig. 13

REINSTALLATION PROCEDURES

1. Reverse the Removal Procedures for reinstalling the Upper Cylinder, the RT Rotor Base, the Stator Angle.

NOTE: The Upper Cylinder should correctly match the white and green portions of the P.C. Board of the Bottom Cylinder as shown in Fig. 13.

2. Before reinstalling the Stator Angle, as shown in Fig. 15, carefully tighten screws (A) with the designated "Stator Angle Adjustment JIG (VFK0268)". After screws (A) are properly tightened, disengage this Jig.
3. Reinstall the connector.
4. Play back the pre-recorded tape, and check the playback picture.

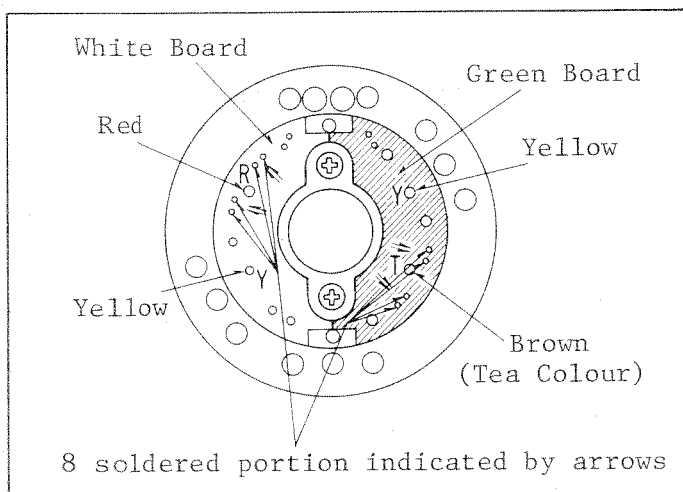


Fig. 14

STATOR ANGLE ADJUSTMENT JIG

To correctly reinstall the Stator Angle, the designated Stator Angle Adjustment Jig (VFK0268) must be used.

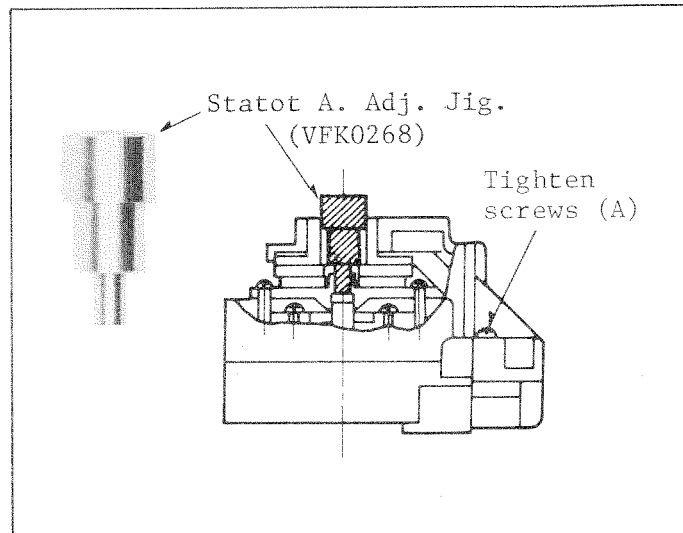


Fig. 15

2-1-4. REPLACEMENT OF AC CORD

Note: When AC cord is replaced, please change both AC cord cover and Binding wire without fail for safety operation.

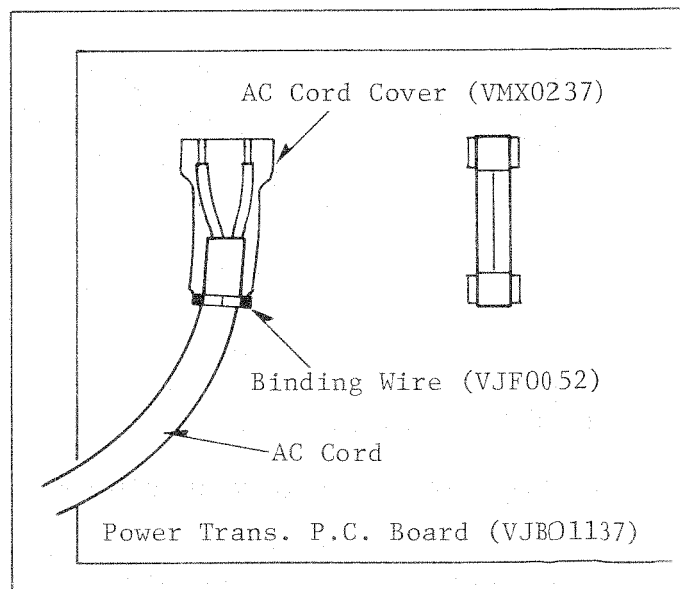


Fig. 16

2-2. ELECTRICAL ADJUSTMENT PROCEDURES

This section provides complete electrical adjustment procedures which may be required for electronic circuits of VHS Video Cassette recorder NV-850.

2-2-1. TEST EQUIPMENTS

To perform the electrical adjustments completely, following equipments are required.

1. VTVM (Vacuum Tube Volt Meter) or DVM (Digital Volt Meter)
Voltage Range: 0.001 - 50V
2. Dual-Trace Oscilloscope
Voltage Range: 0.005 - 50V/div.
Frequency Range: DC - 10MHz
Probes: 10:1 or 1:1
3. Frequency Counter
Frequency Range: 0 - 10MHz
4. Signal Generator (Sinewave)
Frequency Range: 0 - 10MHz
5. Video Sweep Generator
Frequency Range: 0 - 10MHz
6. Colour Monitor TV
7. Plastic Tip Driver
8. VHS Alignment Tape (VFM8100H3D)

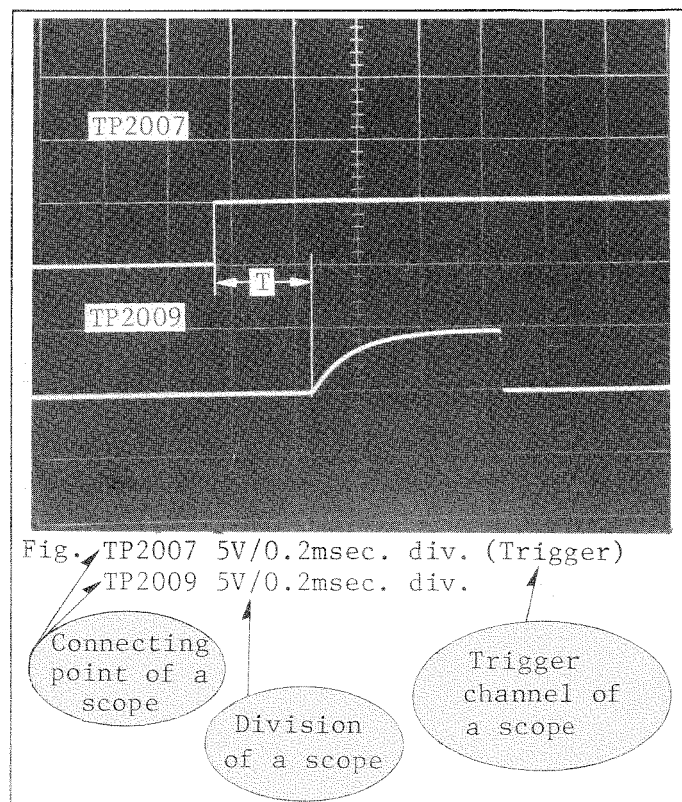


Fig. 18

POWER SUPPLY SECTION

2-2-3. REG +5V ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP1001	R1003	STOP	
TAPE	M. EQ.	SPEC.	
	D.V.M	5.1±0.1V	

SERVO SECTION

2-2-4. PG SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2007 TP3001	R2018	PLAY	
TAPE	M. EQ.	SPEC.	
ALIGNMENT TAPE (VFM8100H3D)	OSCILLOSCOPE	6.5±0.5H	

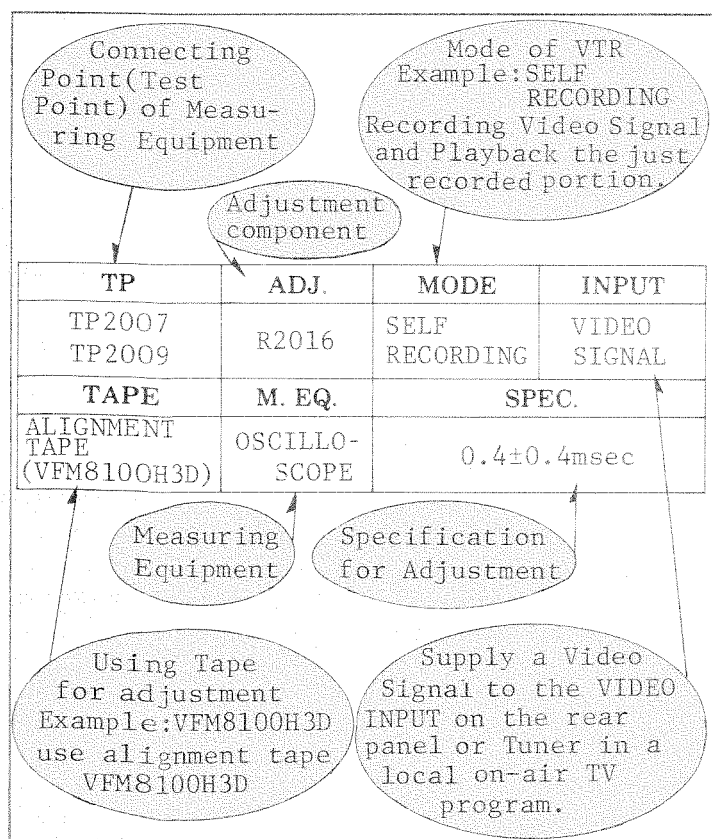


Fig. 17

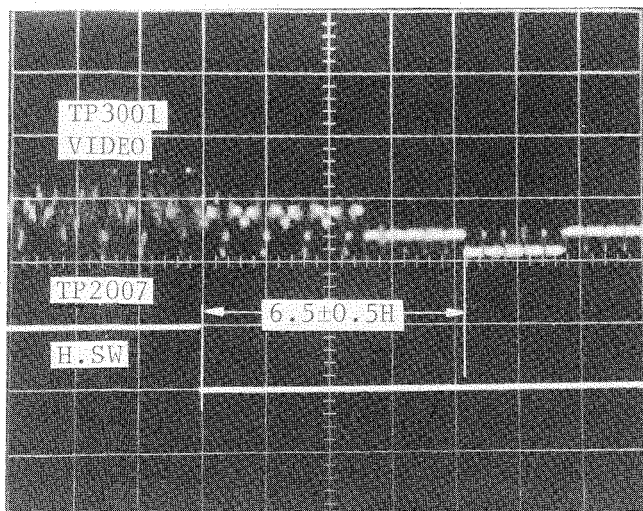


Fig. 19 TP3001 2V/0.1msec.div.
TP2007 5V/0.1msec.div.(Trigger)

2-2-5. TRACKING FIX ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2007 TP2009	R2016	SELF RECORDING	VIDEO SIGNAL
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO- SCOPE	T=0.4±0.4msec	

1. TRACKING VR is center fix position.
2. Playback the just recorded portion.
3. Adjust R2016 for 0.4±0.4msec. as shown below.

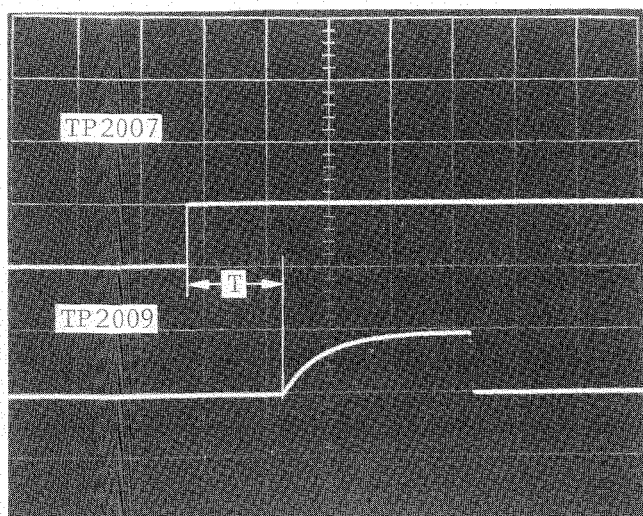


Fig. 20 TP2007 5V/0.2msec.div.(Trigger)
TP2009 5V/0.2msec.div.

2-2-6. NOISE SHIFT PULSE PHASE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2007 TP2014	R2066	STILL	
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO- SCOPE	2±0.1msec	

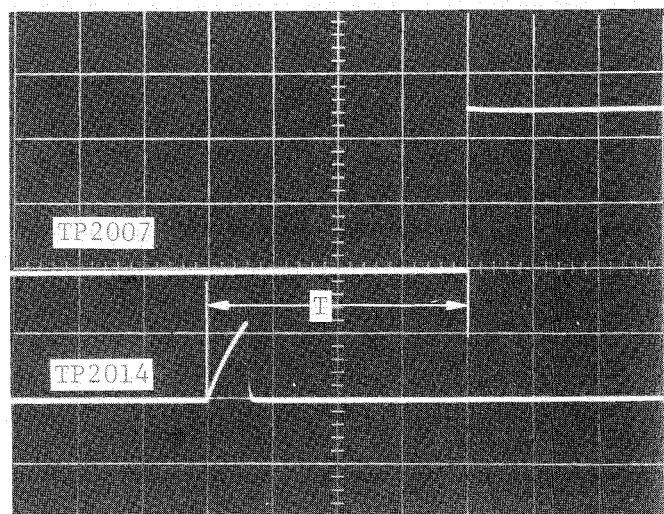


Fig. 21 TP2007 2V/0.5msec.div.(Trigger)
TP2014 2V/0.5msec.div.

2-2-7. ARTIFICIAL V-SYNC ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2007 TP2010	R2072 R2085	STILL CUE/REV	
TAPE	M. EQ.	SPEC.	
ALIGNMENT TAPE	OSCILLO- SCOPE	A=272±25μsec B=144±25μsec	

1. Adjust R2072 for the period "A" as 272±25µsec. during PLAY. STILL mode as shown below.

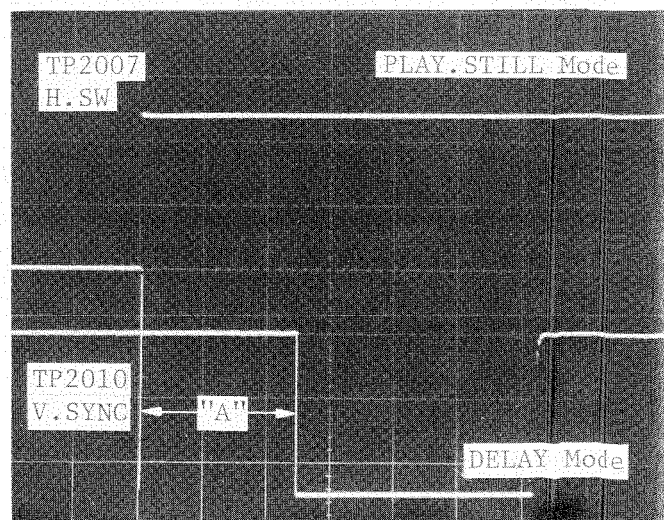


Fig. 22 TP2007 2V/0.1msec. div.(Trigger)
TP2010 2V/0.1msec. div.

- Adjust R2085 for the period "B" as $144 \pm 25 \mu\text{sec.}$ during CUE or REV mode as shown below.

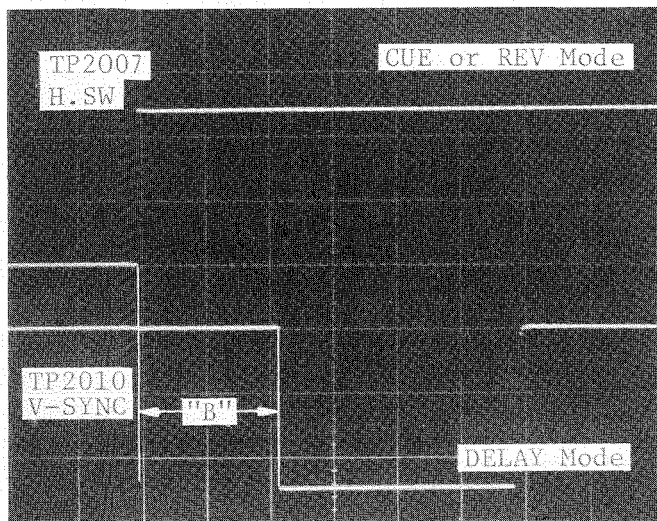


Fig. 23 TP2007 2V/50 $\mu\text{sec.}$ div. (Trigger)
TP2010 2V/50 $\mu\text{sec.}$ div.

LUMINANCE, CHROMINANCE & HEAD AMP SECTION

2-2-8. LUMINANCE RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3506 (HOT) TP3505 (GND)	R3521	REC.PLAY	VIDEO SIGNAL
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO- SCOPE	$130 \pm 5 \text{mVp-p}$	

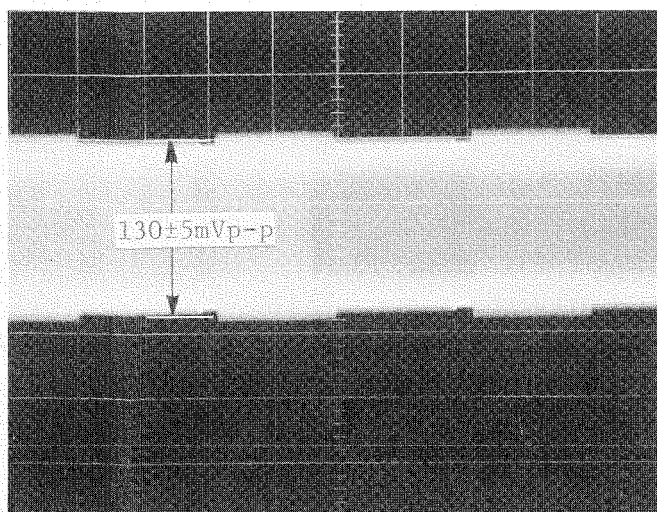


Fig. 24 TP3506 50mV/5msec.div.

2-2-9. CONFIRMATION OF CHROMINANCE REC. CURRENT

TP	ADJ.	MODE	INPUT
TP3506 (HOT) TP3505 (GND)		REC.PLAY	VIDEO SIGNAL
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO- SCOPE	$28 \pm 2 \text{mVp-p}$	

- Connect a jumper wire between TP3509 and GND.

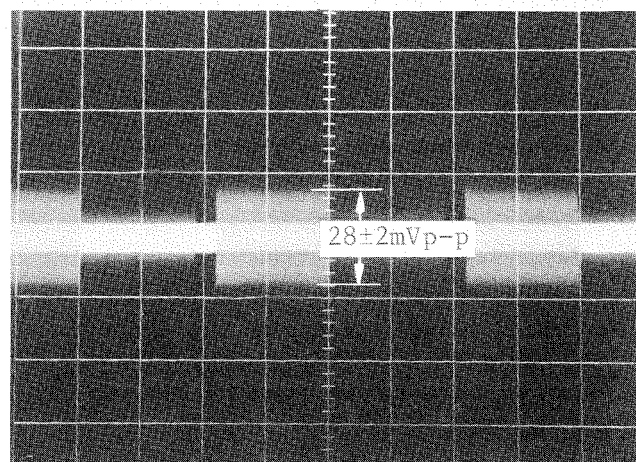


Fig. 25 TP3506 20mV/5msec.div.

2-2-10. VIDEO PLAYBACK LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
LINE OUT	R3575	SELF RECORDING	VIDEO SIGNAL
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO- SCOPE	$2.0 \pm 0.1 \text{Vp-p}$ (Y-LEVEL) $1.1 \pm 0.15 \text{Vp-p}$ (CYAN- LEVEL)	

- Playback the just recorded portion.
- Adjust R3575 for Y-level and confirm cyan level as shown below.

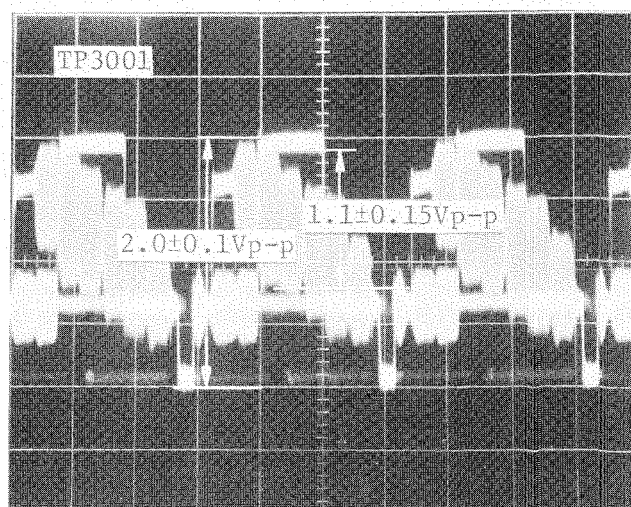


Fig. 26 TP3001 0.5V/20 $\mu\text{sec.}$ div.

2-2-11. LINE MUTUAL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3051	R3056	SELF RECORDING	VIDEO SIGNAL
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLOSCOPE		

1. Playback the just Recorded portion.
2. Adjust R3056 so that the level of the sync tip to white peak becomes minimum as shown below.

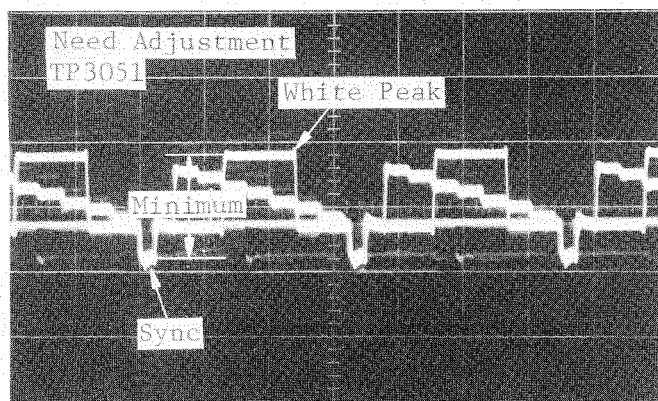


Fig. 27 TP3051 100mV/20μsec.div.

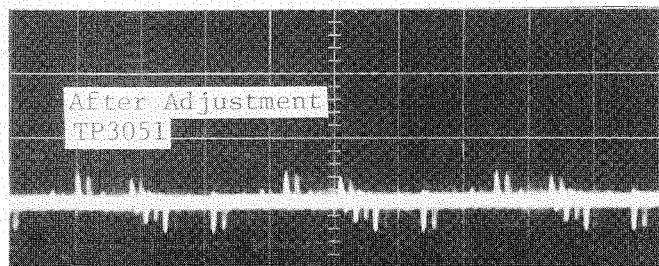


Fig. 28 TP3051 100mV/20μsec. div.

2-2-12. HEAD AMP PEAK FREQUENCY ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3503	C3554,C3555, C3556,R3552, R3553,R3556	PLAY & PLAY. STILL	VIDEO SWEEP (TP3506, TP3508)
TAPE	M. EQ.	SPEC.	
BLANK TAPE	VIF SWEEP OSCILLOSCOPE	2MHz:4.6MHz=1:3	

1. Set the sweep generator output to 100mVp-p at no load and set the marker output at 2MHz and 4.6MHz.

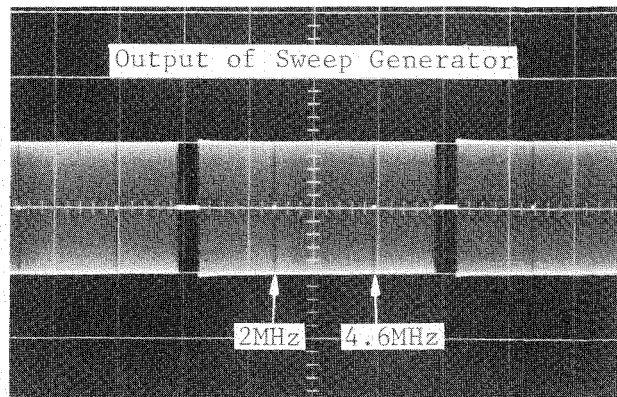


Fig. 29 20mV/5msec.div.

2. Supply sweep generator output to the TP3506 and TP3508 through the 30KΩ resistors as shown below.

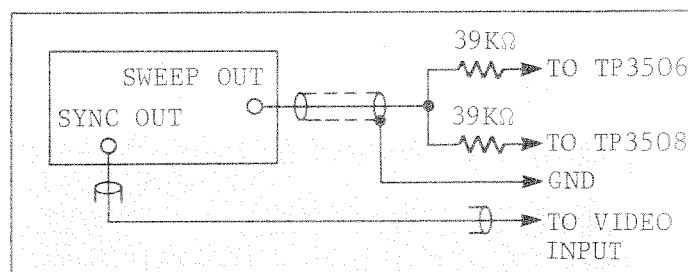


Fig. 30

3. Connect the oscilloscope to TP3503 through Filter Circuit as shown below.

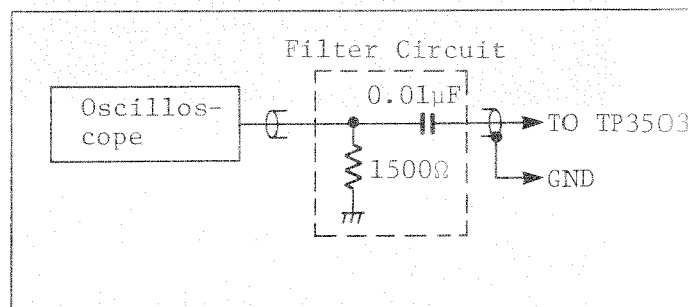


Fig. 31

4. Adjust R3552 (Q-R) and R3556(Q-L) for the envelopes of both channels as shown below in PLAY mode.

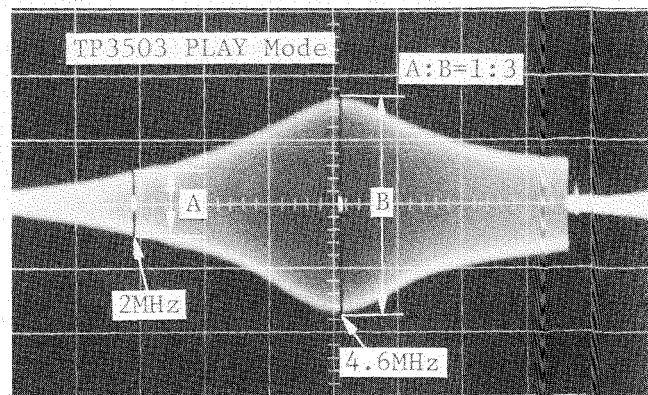


Fig. 32 TP3503 0.5V/2msec.div.

5. Adjust C3555 (PEAK-R) and C3556 (PEAK-L) so that the peak points become 4.6MHz as shown below in PLAY mode.

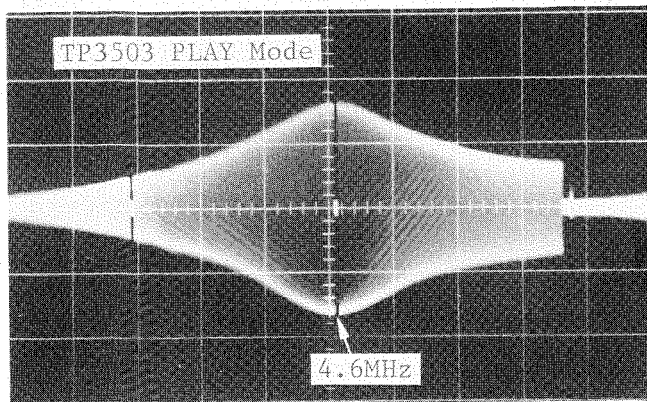


Fig. 33 TP3503 0.5V/2msec.div.

6. Adjust R3553 (Q-L') for the envelope as shown below in PLAY.STILL mode.

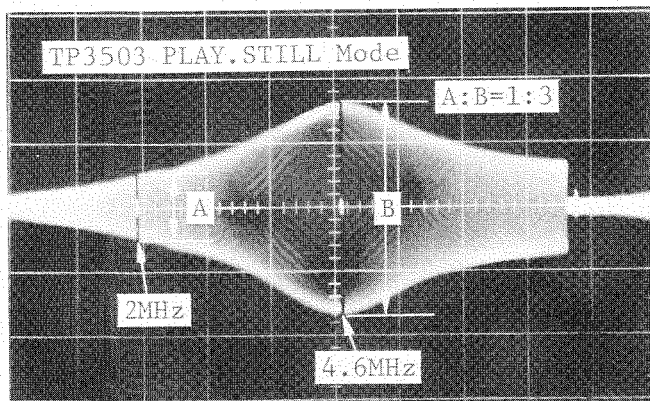


Fig. 34 TP3503 0.5V/2msec.div.

7. Adjust C3554 (PEAK-L') so that the peak point becomes 4.6MHz as shown below in PLAY.STILL mode.

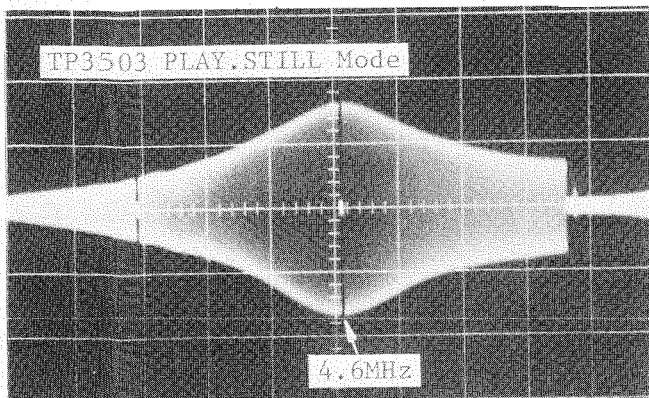


Fig. 35 TP3503 0.5V/2msec.div.

2-2-13. HEAD AMP FREQUENCY RESPONSE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3001	R3552 R3553 R3556	SELF RECORDING	VIDEO SWEEP
TAPE	M. EQ.	SPEC.	
BLANK TAPE	VIDEO SWEEP, OSCILLOSCOPE		

1. Set the sweep generator output as shown below.

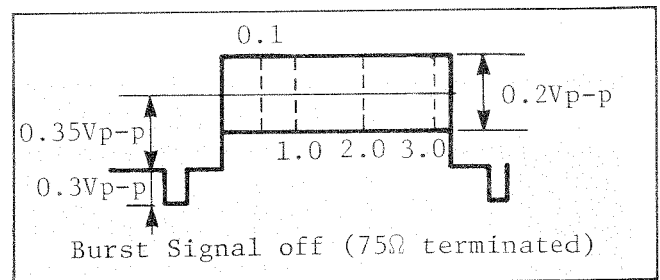


Fig. 36

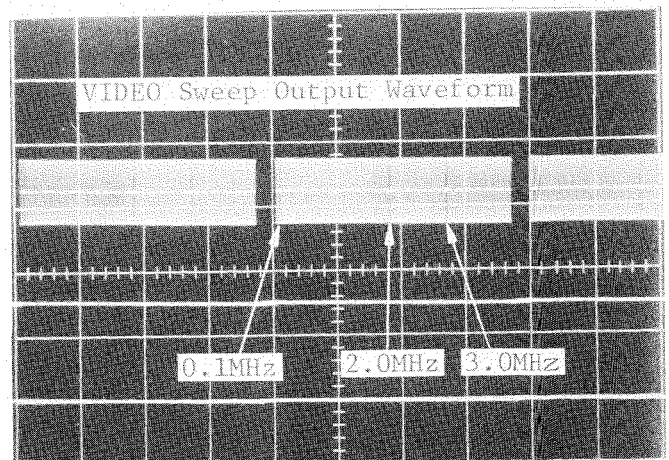


Fig. 37 0.2V/5msec.div.

2. PICTURE VR is center fix position.
3. Playback the just recorded portion.
4. Adjust R3552 and R3556 so that the waveforms become as shown below.

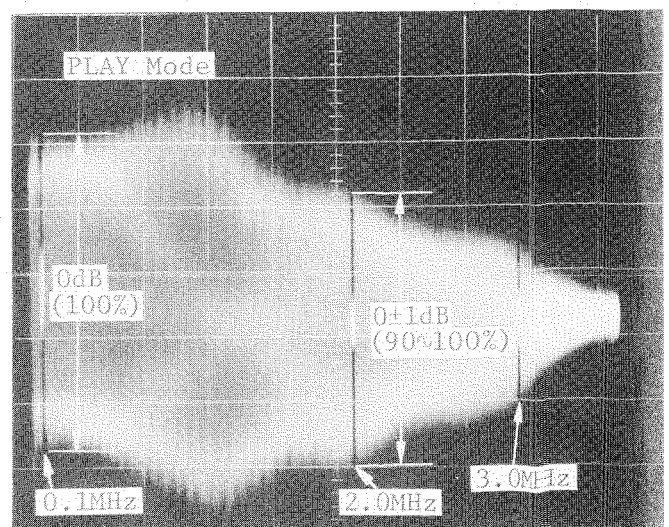


Fig. 38 TP3001 100mV/2msec.div.

2-2-14. SECAM KILLER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP8005	L8009	REC.PLAY	SECAM SIGNAL
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLOSCOPE		

1. Adjust L8009 so that the point "A" becomes minimum peak on the waveform as shown below.

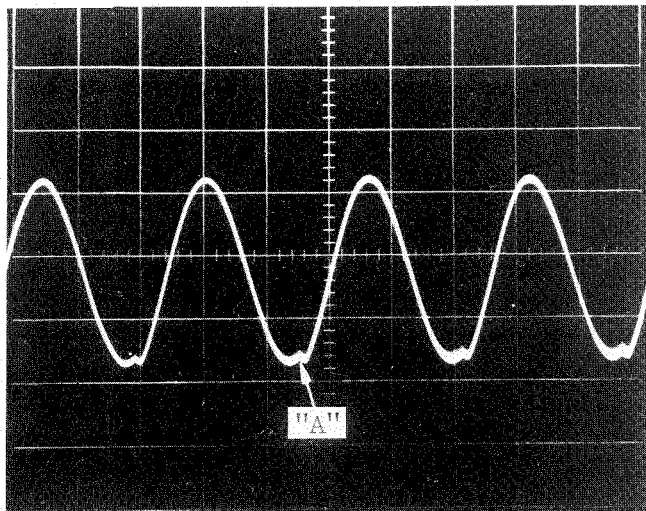


Fig. 39 TP8005 2V/50μsec.div.

AUDIO SECTION

2-2-15. AUDIO BIAS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4002(+) TP4003(-)	R4018	REC.PLAY	
TAPE	M. EQ.	SPEC.	
BLANK TAPE	V.T.V.M.	4.0±0.1mVrms	

2-2-16. PLAYBACK AUDIO SW ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2007 TP2013	R2073	SELF RECORDING	1kHz,0dB
TAPE	M. EQ.	SPEC.	
BLANK TAPE	SIGNAL GENERATOR, OSCILLOSCOPE	6.67±0.05ms.	

1. Set the Input Select SW of the deck to AUDIO mode.
2. Connect the signal Generator output to the both Input Jacks (L) and (R).
3. Adjust R2073 for the period "T" becomes $6.67 \pm 0.05 \text{ms.}$
4. Confirm that the sounds on CH-1 and CH-2 do not contain beat noise.

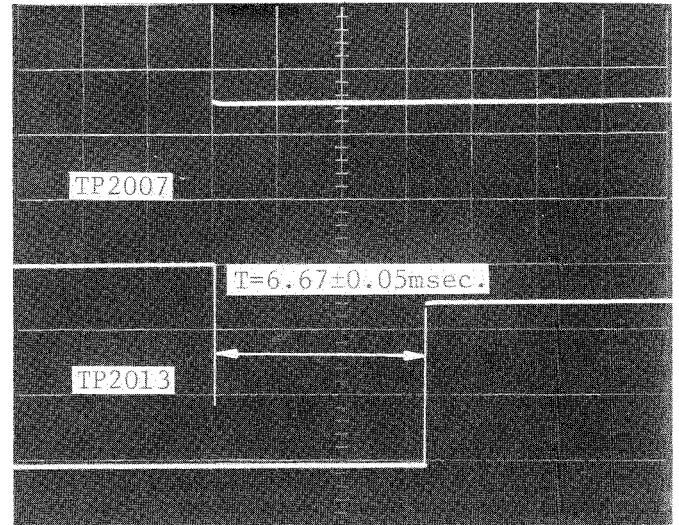


Fig. 40 TP2007 2V/2msec.div.(Trigger)
TP2013 2V/2msec.div.

2-2-17. AUDIO AGC CHANNEL BALANCE ADJUSTMENT

TP	ADJ.	MODE	INPUT
LINE OUT	R4329	STOP	1kHz,0dB
TAPE	M. EQ.	SPEC.	
	V.T.V.M.	400±60mVrms	

1. Set the mode select sw of the deck to the STEREO (Ch1+Ch2) mode and Recording level volume is AGC position.
2. Adjust R4329 so that the LINE OUT level is less than 0.5dB, compared with input level.
3. Confirm the E-E level for $400 \pm 60 \text{mVrms.}$

2-2-18. AUDIO RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4507(HOT) TP4508(GND)	R4612	REC.PLAY	
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLOSCOPE	250±10mVp-p	

2-2-19. FM AUDIO CARRIER FREQUENCY ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4504 TP4509	R4503 (CH-1) R4597 (CH-2)	STOP	
TAPE	M. EQ.	SPEC.	
	FREQUENCY COUNTER	1.4MHz±10KHz(CH-1) 1.8MHz±10KHz(CH-2)	

2-2-20. AUDIO DEVIATION ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4502(CH-1) TP4521(CH-2)	R4516 R4586	REC.PLAY	1KHz, 0dB
TAPE	M. EQ.	SPEC.	
BLANK TAPE	SIGNAL GENERATOR D.V.M.	33±3mV-AC	

1. Adjust R4516 so that the CH-1 Audio deviation level becomes $33\pm 3\text{mV-AC}$.
2. Adjust R4586 so that the CH-2 Audio deviation level becomes $33\pm 3\text{mV-AC}$.

2-2-21. AUDIO RECORDING OUTPUT LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
LINE OUT	R4006 R4541 R4593	SELF RECORDING	1KHz, 0dB AUDIO SIGNAL VIDEO SIGNAL
TAPE	M. EQ.	SPEC.	
BLANK TAPE	V.T.V.M.		

1. Set the Recording level volume is AGC position.
2. Playback the just Recorded portion.
3. Adjust R4006 (P.B.LEV.) at the normal position of the sound track select button, R4541 (FM AUDIO: CH-1) and R4593 (FM AUDIO: CH-2) at the "L+R" position of the sound track select button, so that the Playback level is less than $\pm 0.5\text{dB}$, compared with E-E level in each mode (P.B.LEV., FM Audio CH-1 and 2).

2-2-22. NOISE REDUCTION TIMING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4505(HOT) TP4511(GND)	R4572	STOP	
TAPE	M. EQ.	SPEC.	
	D.V.M.	15±0.15mV	

2-2-23. AUDIO MUTING ADJUSTMENT

TP	ADJ.	MODE	INPUT
	R4568	SELF RECORDING	
TAPE	M. EQ.	SPEC.	
BLANK TAPE			

1. Set the Hi-Fi sound SW to "L+R" mode and the Recording level volume is AGC position.
2. Playback the just Recorded portion.
3. Adjust the Tracking VR so that the Audio Tracking level becomes maximum.
4. First Re-adjust R4568 until the L+R indication on the Front panel turns OFF.
5. Then slowly adjust R4568 where the L+R indication just turns ON.
6. Confirm that the sounds on CH-1 and CH-2 do not contain abnormal sound.

OPERATION SECTION

2-2-24. OPERATION CLOCK ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP6501	R6515	STOP	
TAPE	M. EQ.	SPEC.	
	FREQUENCY COUNTER	22.0±0.1KHz	

1. Disconnect the AC plug of the deck and connect a jumper wire between TP6502 and GND.
2. Connect the AC plug and Adjust R6515 for $22.0\pm 0.1\text{KHz}$ as shown below.

TIMER & CHANNEL PRESET SECTION

2-2-25. TIMER RESET ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP7501	R7509		
TAPE	M. EQ.	SPEC.	
	OSCILLOSCOPE DC POWER SUPPLY	7.8msec	

1. Set the voltage of the DC POWER SUPPLY for $3.7 \pm 0.05V$ DC then connect the DC POWER SUPPLY to TP7504.
2. Adjust R7509 for 7.8msec. (128Hz) as shown below.

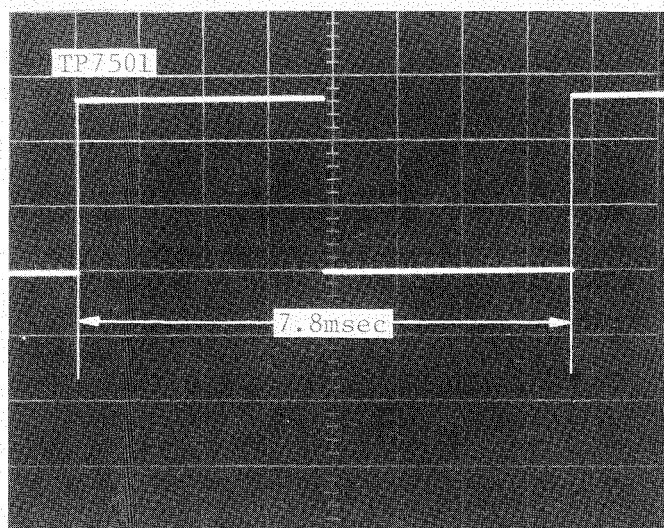


Fig. 41 TP7501 2V/1msec.div.

2-2-26. TIMER RESET VOLTAGE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP7501	R7535		
TAPE	M. EQ.	SPEC.	
	OSCILLOSCOPE DC POWER SUPPLY		

1. Connect a jumper wire between TP7504 and TP7505.
2. Set the voltage of the DC POWER SUPPLY for $4.6 \pm 0.05V$ and connect the DC POWER SUPPLY to TP7505.
3. Adjust R7535 for 62msec. (16Hz) as shown in Fig. 42.

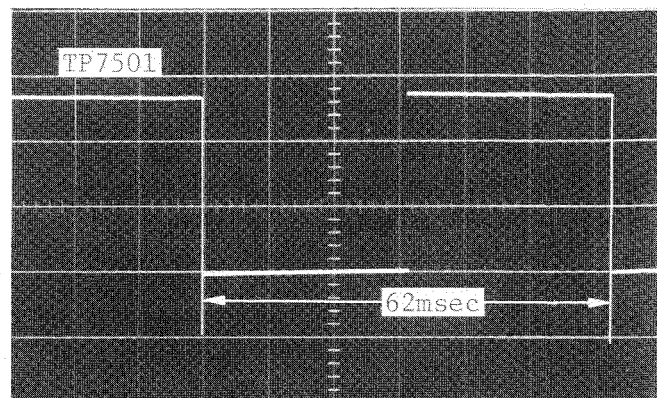


Fig. 42 TP7501 2V/10msec.div.

4. Set the Voltage of the DC POWER SUPPLY for $4.8 \pm 0.05V$.
5. Confirm the frequency for 7.8msec(128Hz) as shown below.

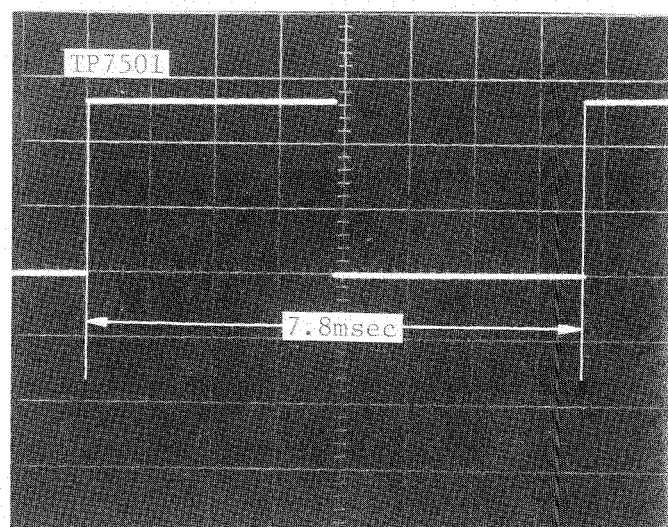


Fig.43 TP7501 2V/1msec.div.

2-2-27. TIMER CLOCK ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP7501	C7502		
TAPE	M. EQ.	SPEC.	
	FREQUENCY COUNTER	128Hz	

1. Set the voltage of the DC POWER SUPPLY for $6.0 \pm 0.1V$ and connect the DC POWER SUPPLY to P7502-6.
2. Adjust C7502 for 128Hz.

TV DEMODULATOR SECTION

Model No.: NV-850EG

2-2-28. TEST EQUIPMENTS

To make adjustment completely, following equipments are required.

1. VIF Sweep Generator with the Trap Adjustor 38.9MHz
2. CW Oscillator 38.9MHz ± 100 KHz
3. Monitor Scope
4. Oscilloscope
5. Digital Volt Meter

2-2-29. SELECTIVE COIL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP714	T704 T705		VIF SWEEP
TAPE	M. EQ.	SPEC.	
	VIF SWEEP MONITOR SCOPE	A=1.0Vp-p B=38.9MHz	

1. Connect a jumper between TP713 and GND.
2. Set the BAND SW of the deck to the VHF high position (VH) and turn the tuning volume so that the voltage at BT terminal of the tuner becomes 15V.
3. Connect the VIF Sweep to TP711 and connect the Monitor Scope to TP714 as shown below.

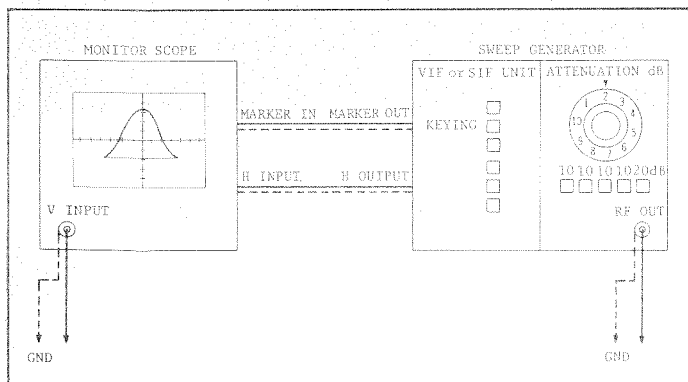


Fig. 44 Connection of Measuring Equipment

4. Connect the JIG to Both points TP701 and P704-6 as shown in Fig. 45.

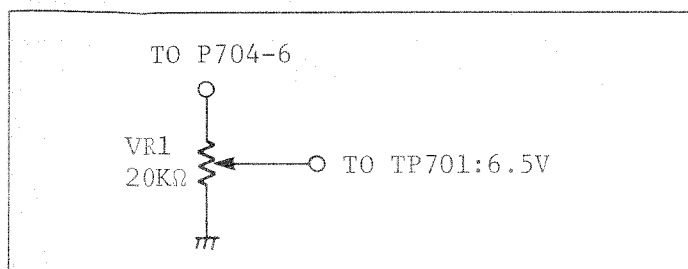


Fig. 45

5. Adjust the VIF Sweep output so that the 1.0Vp-p.
6. Adjust T704 so that the 38.9MHz becomes peak point as shown below.

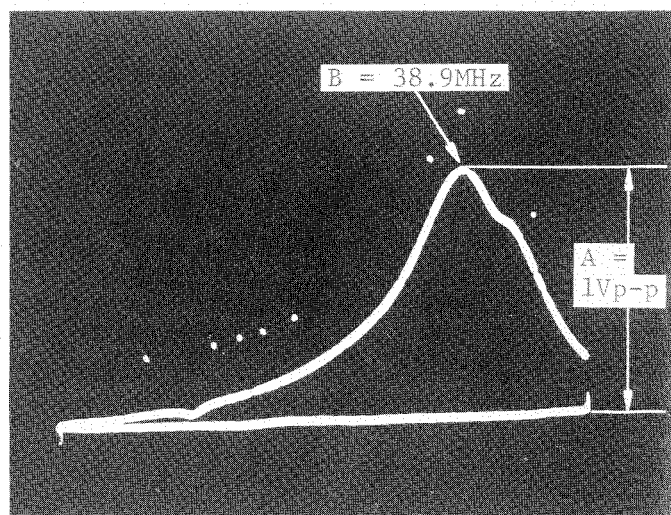


Fig. 46

7. Adjust T705 so that the marker port portion at 38.9MHz becomes as shown below.

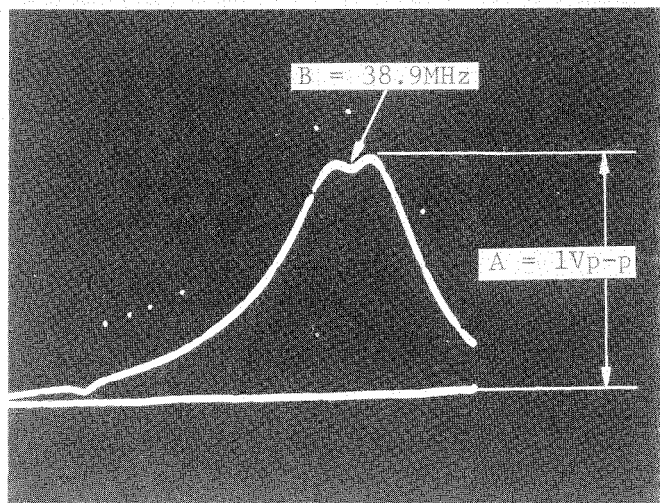


Fig. 47

2-2-30. VIF SWEEP ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP714	T701 T702		VIF SWEEP
TAPE	M. EQ.	SPEC.	
	VIF SWEEP MONITOR SCOPE		

1. Connect a jumper between TP713 and GND.
2. Set the BAND SW to the VHF high position (VH) and turn the tuning volume so that the voltage at BT terminal of the tuner becomes 15V.
3. Connect the VIF Sweep to Test Point of the Tuner and connect the Monitor Scope to TP714 as shown in Fig. 44.
4. Connect the 100 Ω resistor between TP704 and TP705.
5. Adjust the VIF Sweep output so that the 1.0Vp-p.
6. Release 20dB attenuation from the attenuator of the VIF Sweep.
7. Adjust T702-B so that the 40.4MHz trap becomes minimum.
8. Adjust T701 so that the 31.9MHz trap becomes minimum.
9. Adjust T702-C so that the 33.4MHz trap becomes minimum.
10. Connect the JIG to both points P704 -6 and TP701 as shown in Fig. 45.
11. Adjust the Tuner converter coil and T702-A so that the sweep output waveform becomes as follows.

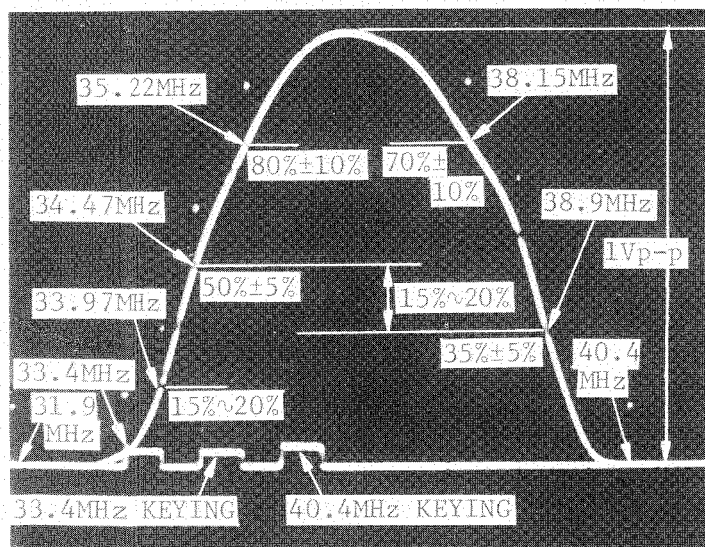


Fig. 48

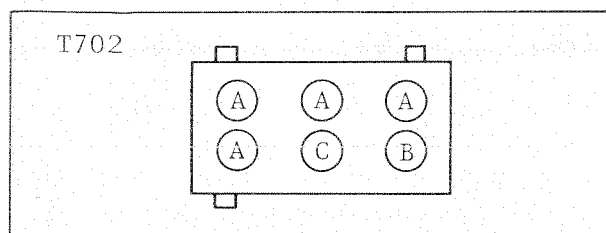


Fig. 49

2-2-31. AFC ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP703	T705		CW SIGNAL
TAPE	M. EQ.	SPEC.	
	D.V.M. CW OSCILLATOR	6.5V $\pm$ 0.3V	

1. Set the BAND SW to the VHF high position (VH), and turn the tuning volume so that the voltage at BT terminal of the tuner becomes 15V.
2. Set the CW Oscillator output to 38.9 MHz 1Vp-p and connect the CW Oscillator output to the Tuner Test point.
3. Connect the D.V.M. to TP703.
4. Confirm the reading "A" of the D.V.M. is 6.5V, when the AFC switch is off.
5. Set the AFC switch to "ON" and adjust T705 for "6.5V $\pm$ 0.3V".
6. Change the frequency of the CW Oscillator $\pm$ 100KHz, centered at 38.9MHz and confirm that the difference of the AFC voltage is more than $\pm$ 3V.

2-2-32. CARRIER TRANSFORMER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP707	T707 T706 T712		VIF SWEEP
TAPE	M. EQ.	SPEC.	
	VIF SWEEP MONITOR SCOPE		

1. Set the BAND SW to the VHF high position (VH) and turn the tuning volume so that the voltage at BT terminal of the tuner becomes 15V.
2. Connect a jumper between TP713 and GND.
3. Connect the VIF Sweep output to Tuner Test Point and connect the Monitor Scope to TP707.
4. Adjust the VIF Sweep output so that the level of it becomes 1.0Vp-p.
5. Release 20dB attenuation from the attenuator of the VIF Sweep.
6. Connect the JIG to both points TP701 and P704-6 as shown in Fig. 45 and adjust the VR1 so that the level of it becomes 1.0 Vp-p.
7. Adjust T707 so that the marker portion at 38.9MHz is peak of the wave as shown next page.

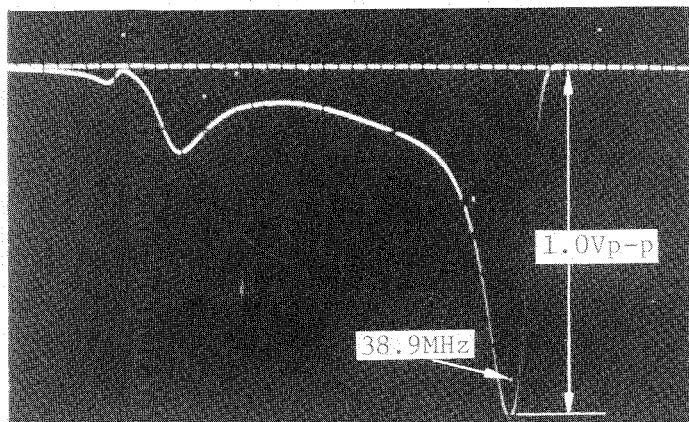


Fig. 50

8. Connect the 100Ω resistor between TP708 and TP709 and remove the JIG.
9. Adjust the output of the VIF Sweep Generator so that the level of waveform becomes $1.0Vp-p$.
10. Release 20dB attenuation from the attenuator of the VIF Sweep and connect the JIG.
11. Adjust the VR1 so that the level of waveform becomes $1.0Vp-p$.
12. Adjust T706-B so that the 40.4MHz trap becomes minimum.
13. Adjust T706-C so that the 31.9MHz trap becomes minimum.
14. Adjust T712 so that the trap becomes at 33.4MHz portion of the VIF waveform as shown below.
15. Adjust T706-A1, T706-A2, T706-A3 and T706-A4 so that the waveform becomes as shown below.

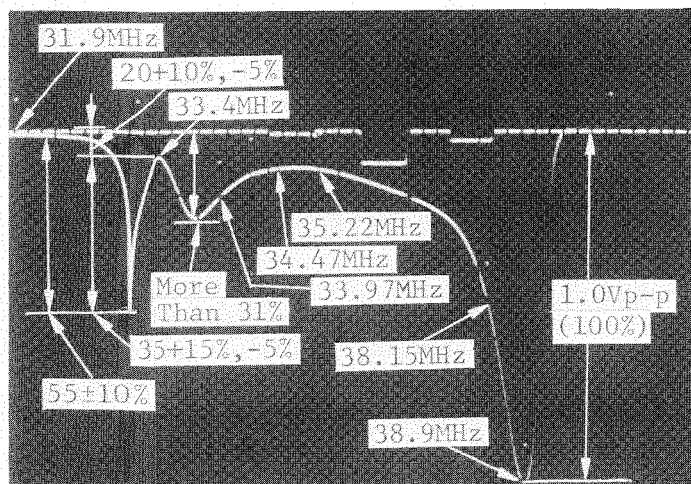


Fig. 51

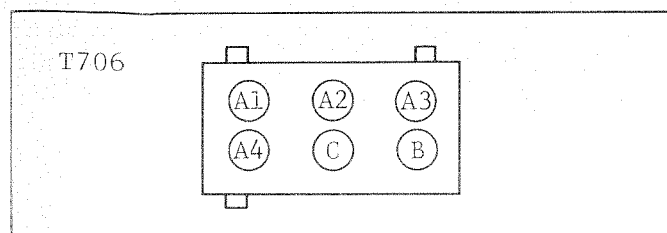


Fig. 52

2-2-33. BURST LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP702	R736		RF COLOUR BAR SIGNAL
TAPE	M. EQ.	SPEC.	
	OSCILLO- SCOPE	$240mV \pm 10mVp-p$	

1. Set the BAND SW to High Position.
2. Tune in the VHF RF Colour Bar signal.
3. Adjust R736 so that the burst level becomes $240mV \pm 10mVp-p$.

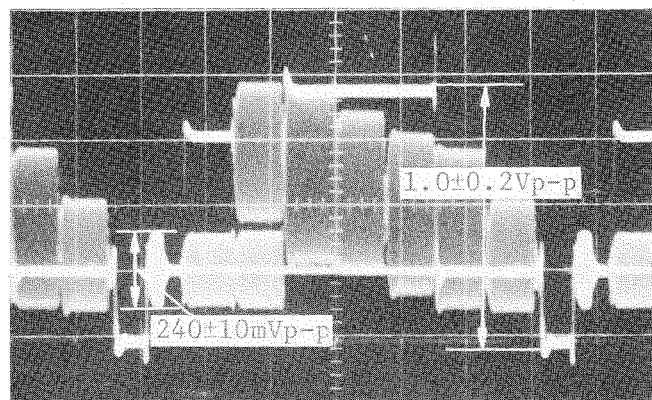


Fig. 53

TV DEMODULATOR SECTION

Model No.: NV-850E

2-2-34. TEST EQUIPMENTS

To make adjustments completely, following equipments are required.

1. VIF Sweep Generator with the Trap Adjustor 38.9MHz
2. SIF Sweep Generator $5.5MHz \pm 150KHz$
3. CW Oscillator $38.9MHz \pm 100KHz$
4. Digital Volt Meter
5. Oscilloscope
6. Monitor Scope

2-2-35. SELECTIVE COIL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP707	T703 T704		VIF SWEEP
TAPE	M. EQ.	SPEC.	
	VIF SWEEP MONITOR SCOPE	A= $2.0Vp-p$ B= $38.9MHz$	

1. Set the BAND SW of the deck to the VHF high position(VH) and turn the tuning volume so that the voltage at BT terminal of the tuner becomes 15V.
2. Connect the VIF Sweep to TP703 and connect the Monitor Scope to TP707 as shown in Fig. 44.

3. Connect the JIG to both points P704-6 and TP701 as shown in Fig. 54 and adjust VR1 so that the Sweep output becomes 2.0Vp-p.
4. Adjust T703 so that the 38.9MHz becomes peak point as shown in Fig. 55.

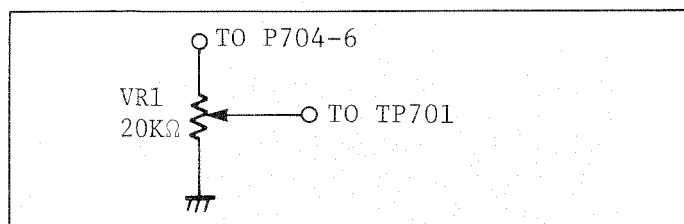


Fig. 54

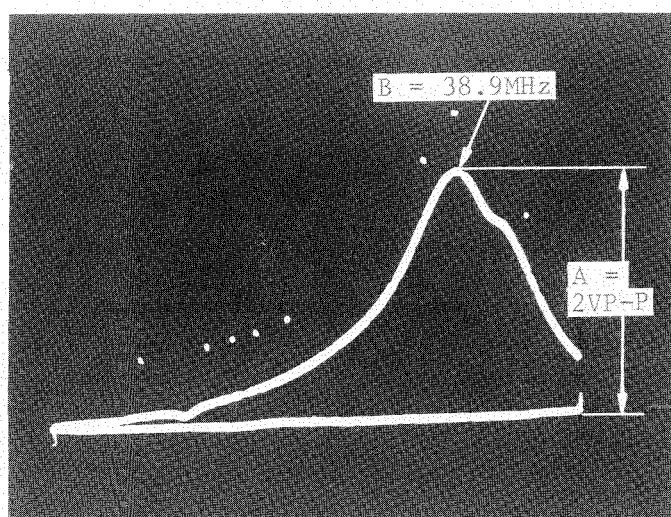


Fig. 55

5. Adjust T704 so that the marker portion at 38.9MHz becomes as shown below.

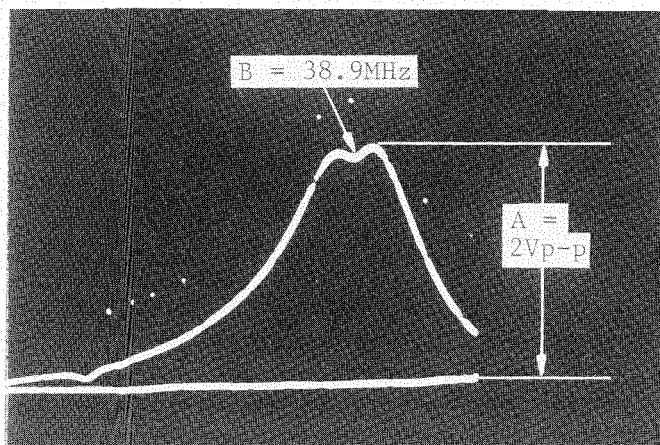


Fig. 56

2-2-36. VIF SWEEP ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP707	T701 T702		VIF SWEEP
TAPE	M. EQ.	SPEC.	
	VIF SWEEP MONITOR SCOPE		

1. Set the BAND SW to the VHF high position (VH) and turn the tuning volume so that the voltage at BT terminal of the tuning becomes 15V.
2. Connect the VIF Sweep to Test Point of the Tuner and connect the Monitor Scope to TP707 as shown in Fig. 44.
3. Connect a jumper between TP701 and GND.
4. Connect the 100Ω resistor between TP704 and TP705.
5. Adjust the VIF Sweep output so that the 1.0Vp-p.
6. Release 20dB attenuation from the attenuator of the VIF Sweep.
7. Connect the JIG to both points P704-6 and TP709 as shown in Fig. 54 and adjust VR1 so that the Sweep output becomes 1.0Vp-p.
8. Adjust T702 so that the 33.4MHz trap becomes minimum.
9. Adjust T701 so that the 40.4MHz trap becomes minimum.
10. Adjust the Tuner converter coil and T701 so that the sweep output waveform becomes as follows.

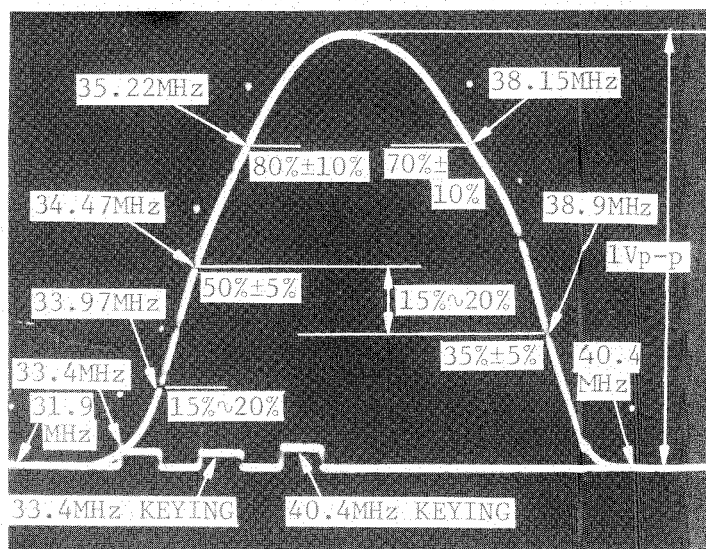


Fig. 57

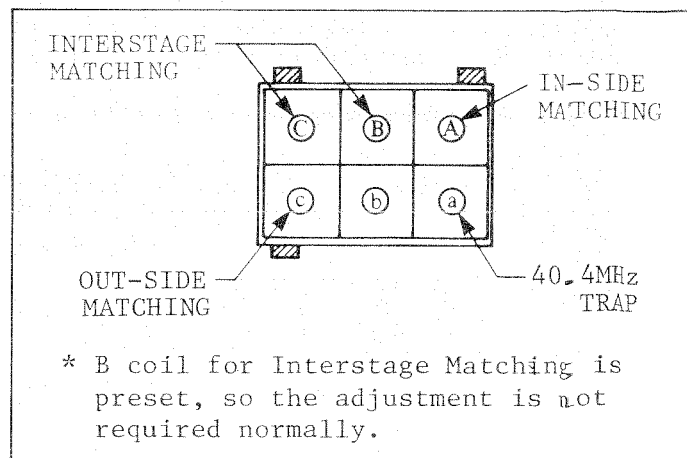


Fig. 58 HLB Transformer T701

2-2-37. SIF SWEEP ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP710	T751 T752		SIF SWEEP
TAPE	M. EQ.	SPEC.	
	SIF SWEEP D.V.M. MONITOR SCOPE		

1. Set the BAND SW to the VHF high position (VH) and turn the tuning volume so that the voltage at BT terminal of the tuning becomes 15V.
2. Connect the JIG to both points P704-6 and TP701 and Adjust the VR1 to 4V.
3. Adjust the SIF Sweep output to 700mVp-p (75Ω open).
4. Connect the sweep to TP706 and connect the Monitor Scope to TP710.
5. Turn R755 fully maximum.
6. Adjust T752 so that the attenuation of 5.5MHz trap becomes minimum.
7. Adjust T751 for maximum peak-to-peak amplitude of response "S" curve as shown below.

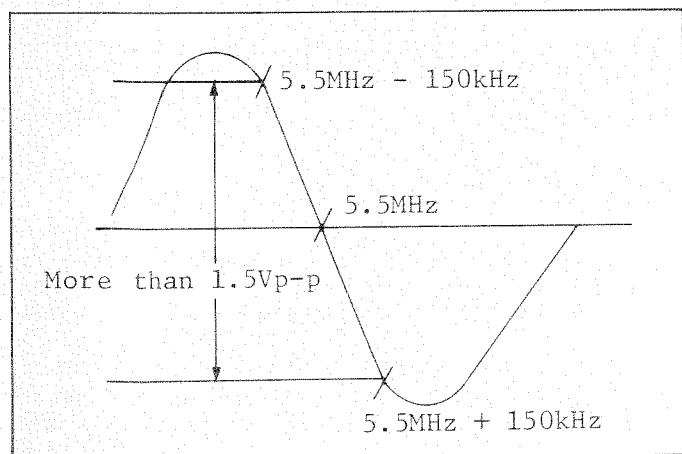


Fig. 59 SIF Waveform

8. Confirm that the level between the 150KHz marker position is more than 1.5Vp-p.

2-2-38. AFC ADJUSTMENT

TP	ADJ.	MODE	INPUT
TUNER TP TP702	T704		CW OSC
TAPE	M. EQ.	SPEC.	
	CW OSCIL- LATOR D.V.M.	A $\pm$ 0.3V	

1. Set the BAND SW to the VHF high position (VH) and turn the tuning volume so that the voltage at BT terminal of the tuning becomes 15V.
2. Set the CW oscillator so that the 38.9 MHz CW signal becomes 1Vp-p.
3. Supply this signal to the Tuner Test Point.
4. Connect the Digital Voltmeter to the Tuner AFC terminal TP702.
5. Confirm the reading of the D.V.M., "A" is between 6.4V and 6.8V, when the AFC switch is off.
6. Set the AFC switch is "ON".
7. Adjust T704 so that the level at the Tuner AFC terminal TP702 becomes "A $\pm$ 0.3V".
8. Change the frequency of the CW oscillator $\pm$ 100KHz, centered at 38.9MHz and confirm that the difference of the AFC voltage is more than $\pm$ 3V.

2-2-39. BURST LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP711	R728		RF COLOUR BAR SIGNAL
TAPE	M. EQ.	SPEC.	
	OSCILLO- SCOPE	240mVp-p	

1. Set the BAND SW to High Position.
2. Tune in the VHF RF Colour Bar Signal.
3. Adjust R728 so that the burst level becomes 240mV $\pm$ 10mVp-p.

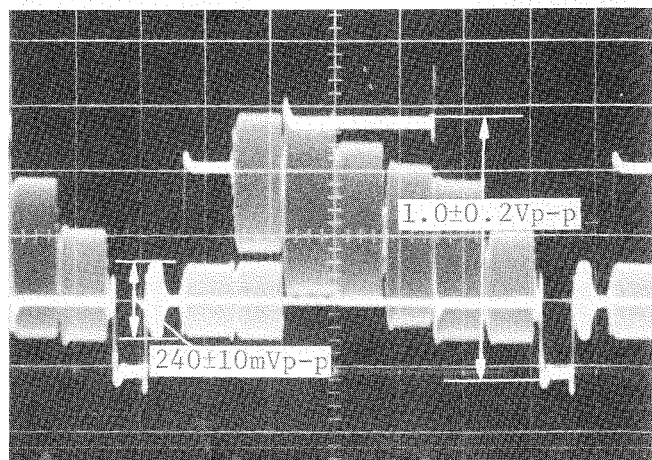


Fig. 60

TV DEMODULATOR SECTION

Model No.: NV-850B

2-2-40. TEST EQUIPMENTS

To make adjustments completely, following equipments are required.

1. VIF Sweep Generator with the Trap Adjustor 39.5MHz
2. SIF Sweep Generator 6.0MHz $\pm$ 150KHz
3. CW Oscillator 39.5MHz $\pm$ 100KHz
4. Digital Volt Meter
5. Oscilloscope
6. Monitor Scope

2-2-41. SELECTIVE COIL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP707	T703 T704		VIF SWEEP
TAPE	M. EQ.	SPEC.	
	VIF SWEEP MONITOR SCOPE	A=2.0Vp-p B=39.5MHz	

1. Set the BAND SW of the deck to the VHF high position(VH) and turn the tuning volume so that the voltage at BT terminal of the tuner becomes 15V.
2. Connect the VIF Sweep to TP703 and connect the Monitor Scope to TP707 as shown in Fig. 44.
3. Connect the JIG to both points P704-6 and TP701 as shown Fig. 61 and adjust VR1 so that the Sweep output becomes 2.0Vp-p.
4. Adjust T703 so that the 39.5MHz becomes peak point as shown below.

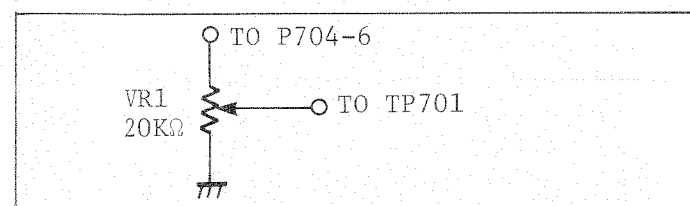


Fig. 61

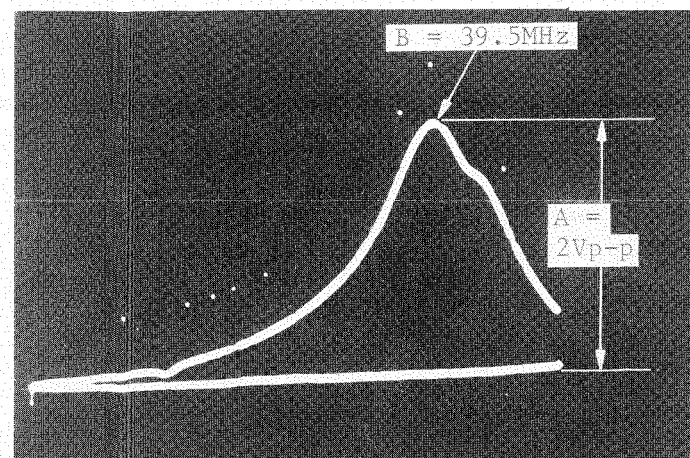


Fig. 62

5. Adjust T704 so that the marker portion at 39.5MHz becomes as shown below.

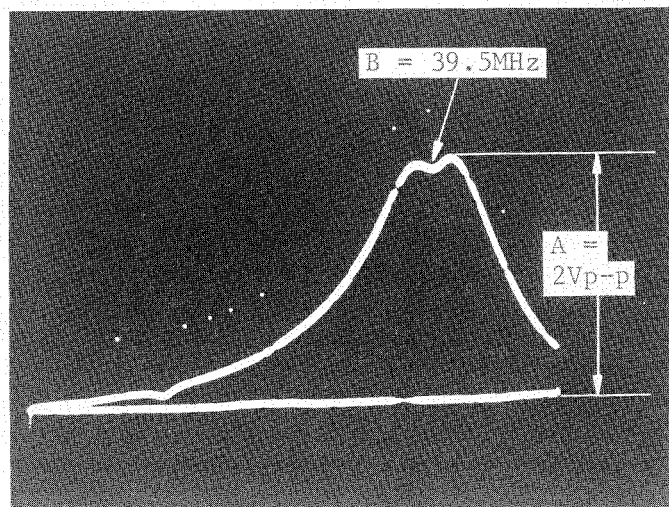


Fig. 63

2-2-42. VIF SWEEP ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP707	T701 T702		VIF SWEEP
TAPE	M. EQ.	SPEC.	
	VIF SWEEP MONITOR SCOPE		

1. Set the BAND SW to the VHF high position (VH) and turn the tuning volume so that the voltage at BT terminal of the tuning becomes 15V.
2. Connect the VIF Sweep to Test Point of the Tuner and connect the Monitor Scope to TP707 as shown in Fig. 44.
3. Connect a jumper between TP701 and GND.
4. Connect the 100Ω resistor between TP704 and TP705.
5. Adjust the VIF Sweep output so that the 1.0Vp-p.
6. Release 20dB attenuation from the attenuator of the VIF Sweep.
7. Connect the JIG to both points P704-6 and TP709 as shown in Fig. 54 and adjust VR1 so that the Sweep output becomes 1.0Vp-p.
8. Adjust T702 so that the 31.5MHz trap becomes minimum.
9. Adjust T701 so that the 41.5MHz trap becomes minimum.
10. Adjust the Tuner converter coil and T701 so that the sweep output waveform becomes as follows.

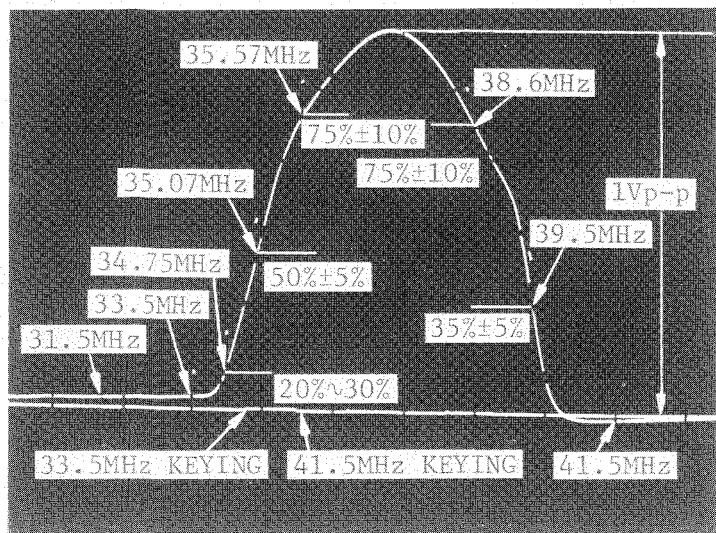


Fig. 64

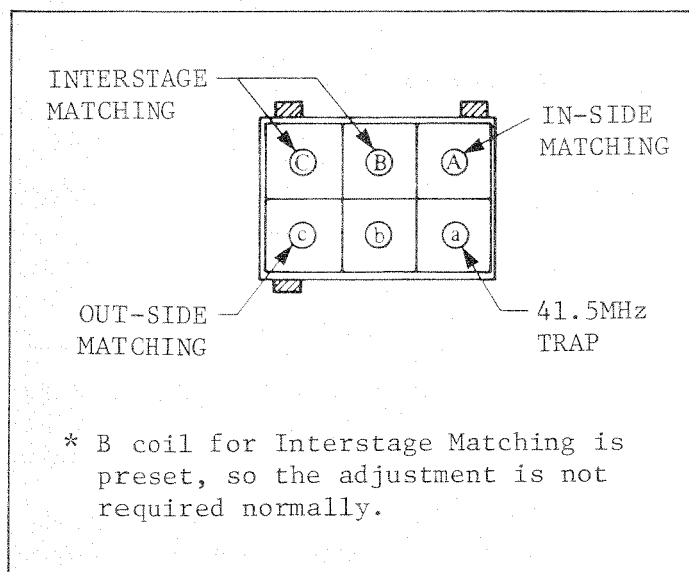


Fig. 65 HLB Transformer T701

2-2-43. SIF SWEEP ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP710	T751 T752		SIF SWEEP
TAPE	M. EQ.	SPEC.	
	SIF SWEEP D.V.M. MONITOR SCOPE		

1. Set the BAND SW to the VHF high position (VH) and turn the tuning volume so that the voltage at BT terminal of the tuning becomes 15V.
2. Connect the JIG to both points P704-6 and TP709 and adjust the VR1 to 4V.
3. Adjust the SIF Sweep output to 700mVp-p (75Ω open).

4. Connect the sweep to TP706 and Connect the Monitor Scope to TP710.
5. Turn R755 fully maximum.
6. Adjust T752 so that the attenuation of 6.0MHz trap becomes minimum.
7. Adjust T751 for maximum peak-to-peak amplitude of response "S" curve as shown below.

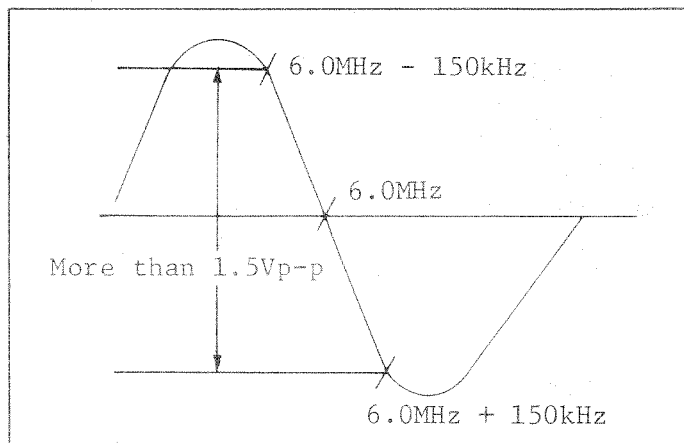


Fig. 66 SIF Waveform

8. Confirm that the level between the 150kHz marker position is more than 1.5 Vp-p.

2-2-44. AFC ADJUSTMENT

TP	ADJ.	MODE	INPUT
TUNER TP TP702	T704		CW OSC
TAPE	M. EQ.	SPEC.	
	CW OSCILLA- TOR D.V.M.	A ± 0.3V	

1. Set the BAND SW to the VHF high position (VH) and turn the tuning volume so that the voltage at BT terminal of the tuning becomes 15V.
2. Set the CW oscillator so that the 39.5MHz CW signal becomes 1Vp-p.
3. Supply this signal to the Tuner Test Point.
4. Connect the Digital Voltmeter to the Tuner AFC terminal TP702.
5. Confirm the reading of the D.V.M., "A" is between 6.5V and 6.8V, when the AFC switch is off.
6. Set the AFC switch is "ON".
7. Adjust T704 so that the level at the Tuner AFC terminal TP702 becomes "A ± 0.3V".
8. Change the frequency of the CW oscillator ±100KHz, centered at 39.5 MHz and confirm that the difference of the AFC voltage is more than ±3V.

2-2-45. BURST LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP711	R728		RF COLOUR BAR SIGNAL
TAPE	M. EQ.	SPEC.	
	OSCILLO- SCOPE	240mVp-p	

1. Set the BAND SW to High Position.
2. Tune in the VHF RF Colour Bar signal.
3. Adjust R728 so that the burst level becomes $240\text{mV} \pm 10\text{mVp-p}$.

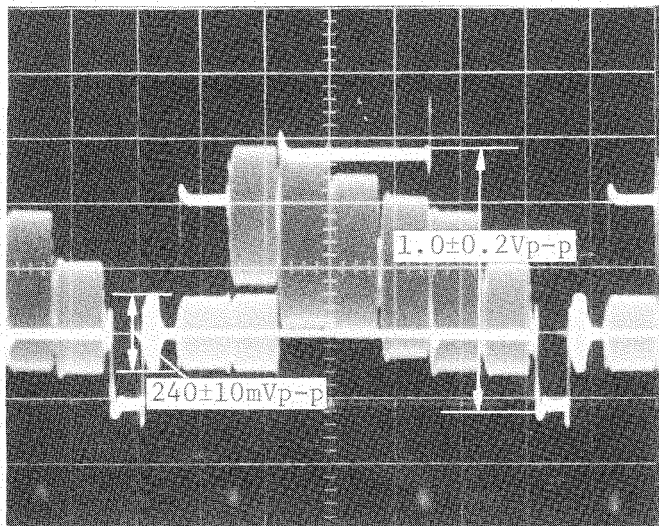


Fig. 67

DECODER SECTION

Model No.: NV-850EG

2-2-46. TEST EQUIPMENTS

To make adjustment completely, following equipments are required.

1. Digital Volt Meter (D.V.M)
2. Oscilloscope
3. Multi Voice Mdlulator (M.V.M)
4. Frequency counter (F. Counter)
5. Noise Meter
6. B.P.F (1KHz)

2-2-47. PLL OSCILLATION FREQUENCY ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP7003 TP7004	R7026 R7028		
TAPE	M. EQ.	SPEC.	
	FREQUENCY COUNTER	234.0±2.0Hz 547.2±2.0Hz	

1. Don't supply any RF signal to RF input.
2. Set the AFC switch to "OFF".
3. Connect the jumper wire between TP706 and the GND.
4. Connect the Frequency counter to TP7003 and adjust R7026 for $234.0 \pm 2.0\text{Hz}$.
5. Connect the Frequency Counter to TP7004 and adjust R7028 for $547.2 \pm 2.0\text{Hz}$.

2-2-48. FM DETECTION TRANSFORMER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP7013 TP7011	T7002 T7003		M.V.M.
TAPE	M. EQ.	SPEC.	
	M.V.M. OSCILLO- SCOPE		

1. Supply a video signal to the input of the Multi Voice Modulator.
2. Connect the output of the Multi Voice Modulator to RF Input.
3. Set the channel to CH10.
4. Set the AFC switch to "ON" and set the Mode selection switch to "CH1+2" position.
5. Connect the oscilloscope to TP7013.
6. Adjust T7002 so that the output level indication on the oscilloscope becomes maximum, more than 400mVp-p.
7. Connect the oscilloscope to TP7011.
8. Adjust T7003 so that the output level indication on the oscilloscope becomes maximum, more than 400mVp-p.

2-2-49. STEREO SEPARATION ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP7008	R7001		M.V.M.
TAPE	M. EQ.	SPEC.	
	M.V.M NOISE METER		

1. Supply a video signal to the input of the Multi Voice Modulator.
2. Connect the output of the Multi Voice Modulator to RF Input.
3. Set the channel to CH10 and Set the AFC switch to "ON".

4. Tune the Output Frequency of the Multi Voice Modulator for CH10 of the deck and place the mode selection switch to "CH1 +2" position.
5. Connect the Noise Meter to TP7008 through the B.P.F(1KHz).
6. Adjust R7001 so that the indication of the Noise Meter becomes minimum.

2-2-50. PILOT SIGNAL TRANSFORMER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP7005	T7001		M.V.M.
TAPE	M. EQ.	SPEC.	
	M.V.M. OSCILLOSCOPE		

1. Supply a video signal to the input of the Multi Voice Modulator.
2. Connect the output of the Multi Voice Modulator to RF Input.
3. Set the Channel to CH10 and set the AFC switch to "ON".
4. Tune the output frequency of the multi Voice Modulator for CH10 of the deck and place the mode selection switch to "CH1+2" position.
5. Connect the oscilloscope to TP7005.
6. Adjust T7001 so that the level of the waveform becomes maximum and also DC level of the waveform becomes maximum.

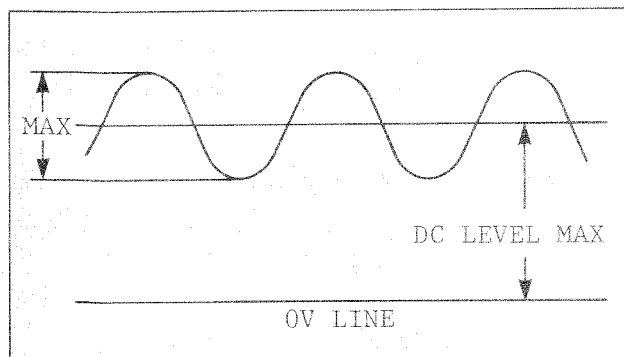


Fig. 68

2-2-51. AUDIO OUTPUT LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP7008 TP7009	R7044 R7040		M.V.M.
TAPE	M. EQ.	SPEC.	
	M.V.M. NOISE METER	100±5mVrms	

1. Supply a video signal to the Input of the Multi Voice Modulator.
2. Connect the output of the Multi Voice Modulator to RF Input.
3. Set the Channel to CH10 and set the AFC Switch to "ON".
4. Tune the output frequency of the Multi Voice Modulator for CH10 of the deck and place the mode selection switch to CH1+2.
5. Connect the Noise Meter to TP7008.
6. Adjust R7044 so that indication of the Noise Meter becomes 100±5mVrms.
7. Connect the noise Meter to TP7009.
8. Adjust R7040 so that indication of the Noise Meter becomes 100±5mVrms.

2-2-52. MAIN AUDIO OUTPUT LEVEL

TP	ADJ.	MODE	INPUT
TP7002	R7076		M.V.M.
TAPE	M. EQ.	SPEC.	
	M.V.M. NOISE METER	85±5mVrms	

1. Supply a video signal to the input of Mult Voice Modulator
2. Set the Mult Voice Modulation mode of Multi Voice Modulator to DUAL M1.
3. Connect the output of the Multi Voice Modulator to RF Input.
4. Set the AFC Switch to "ON".
5. Connect the Noise Meter to TP7002.
6. Adjust R7076 so that the indication of the Noise Meter becomes within 85 ± 5mVrms.

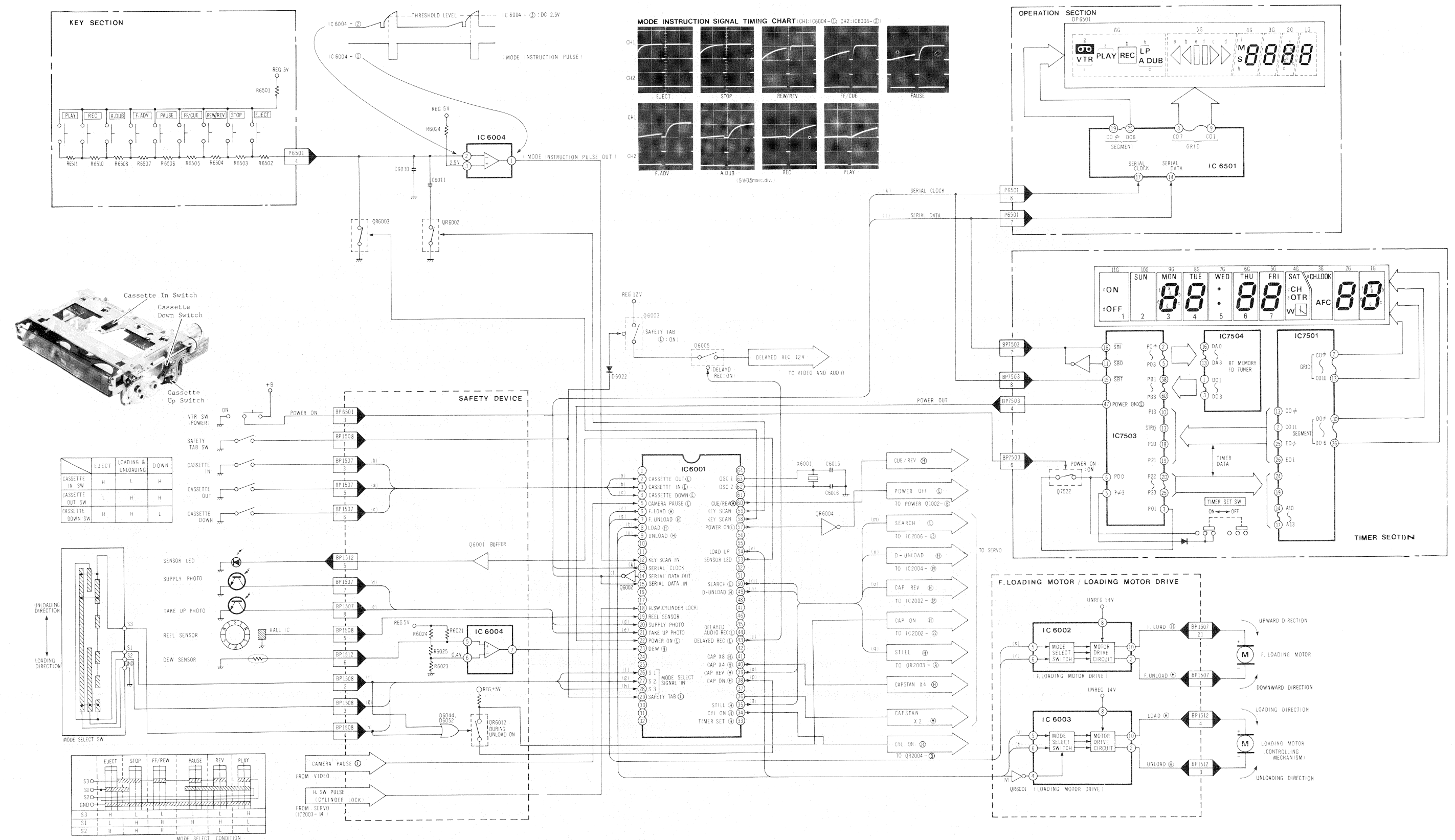
2-2-53. BUZZ ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP7009	T707		M.V.M.
TAPE	M. EQ.	SPEC.	
	M.V.M. NOISE METER	LESS THAN 300µVrms	

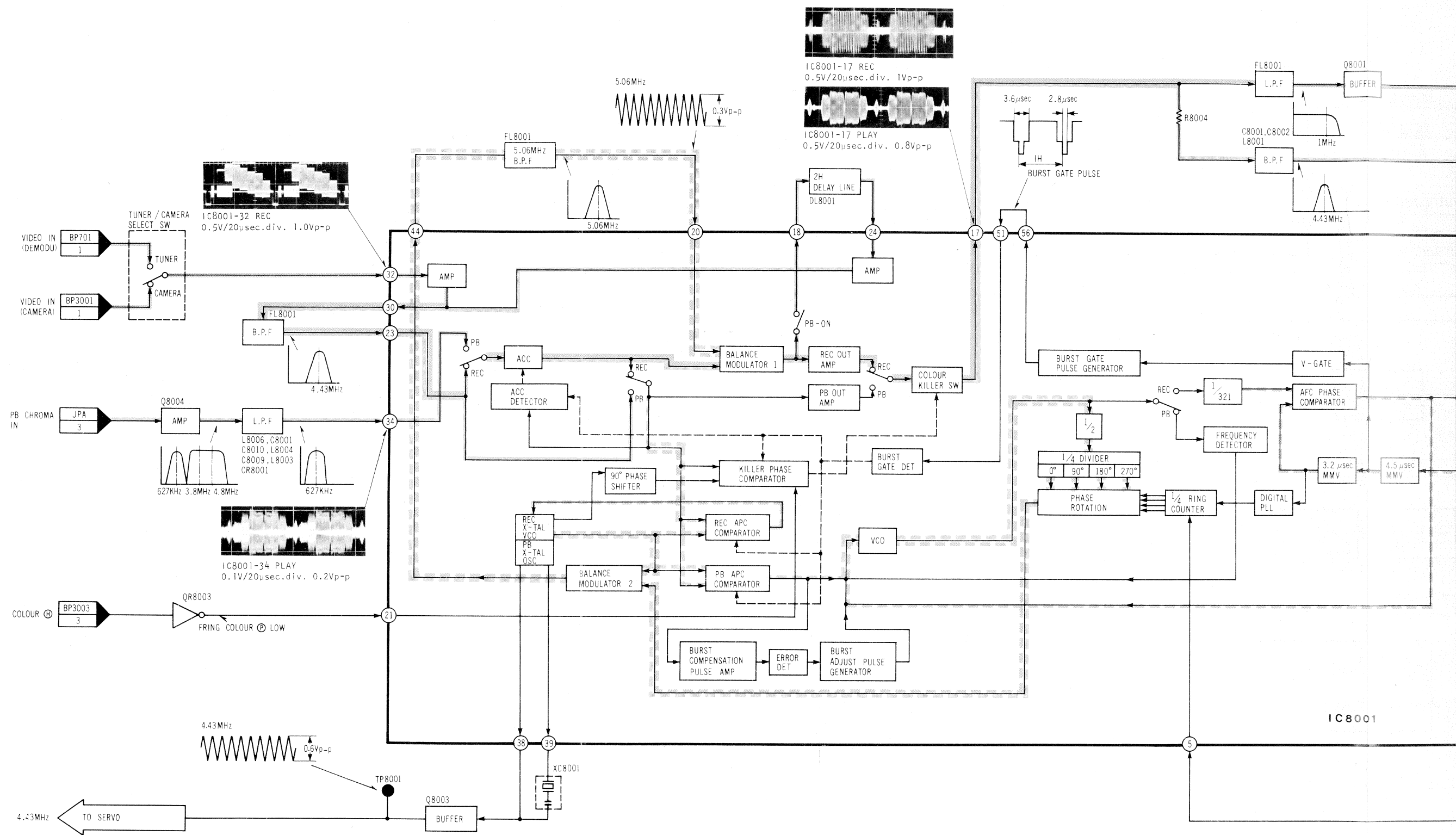
1. Supply a Video Signal to the input of the Multi Voice Modulator.
2. Set the Multi Voice Modulation Mode of Multi Voice Modulator to SINGLE M2, and turn Voice modulation to "OFF" and set the AFC Switch to "ON".
3. Connect the Noise Meter to TP7009.
4. Adjust T707 so that the indication of the Noise Meter becomes minimum.

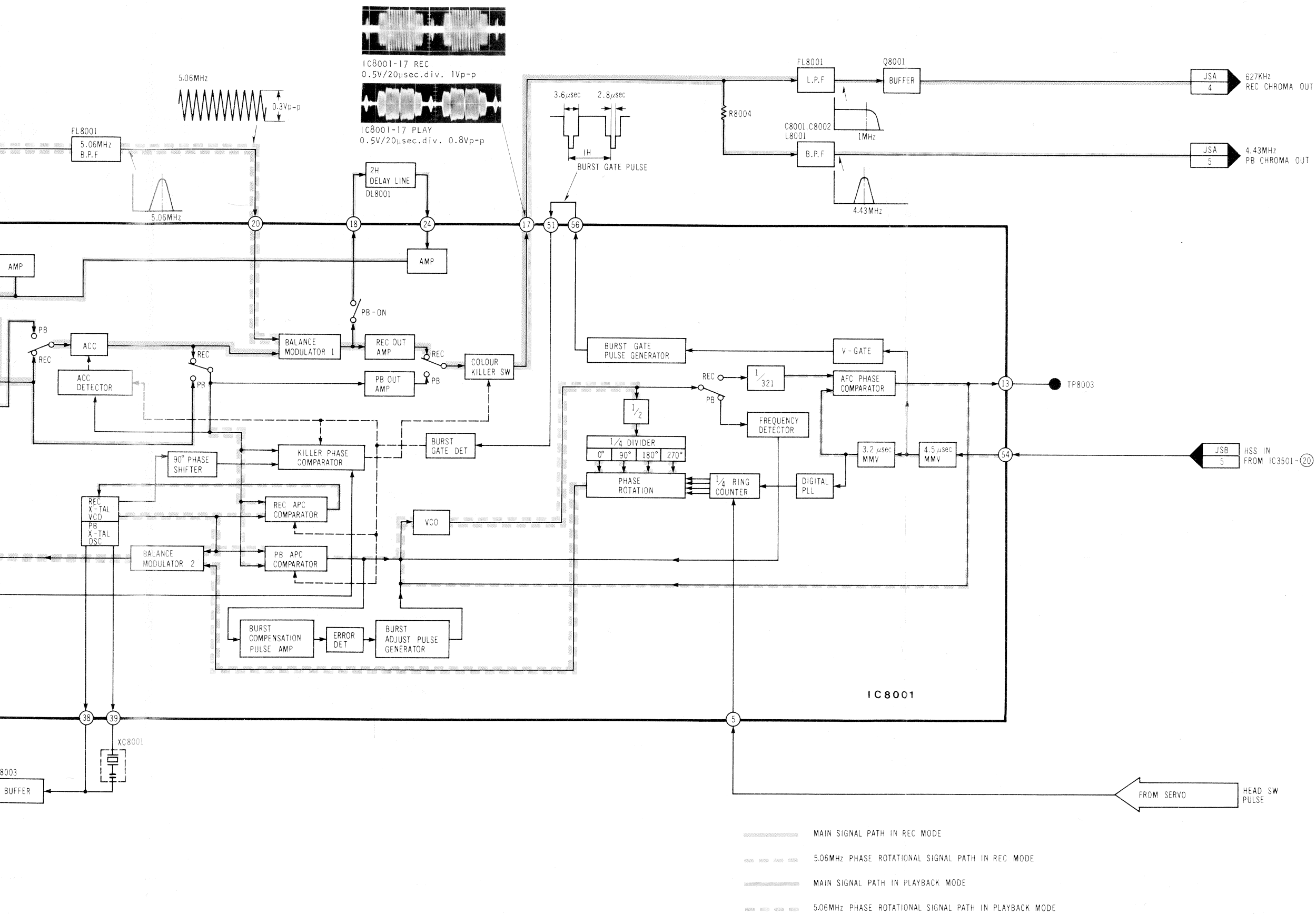
SECTION-3 BLOCK AND SCHEMATIC DIAGRAM

3-1. SYSTEM CONTROL BLOCK DIAGRAM

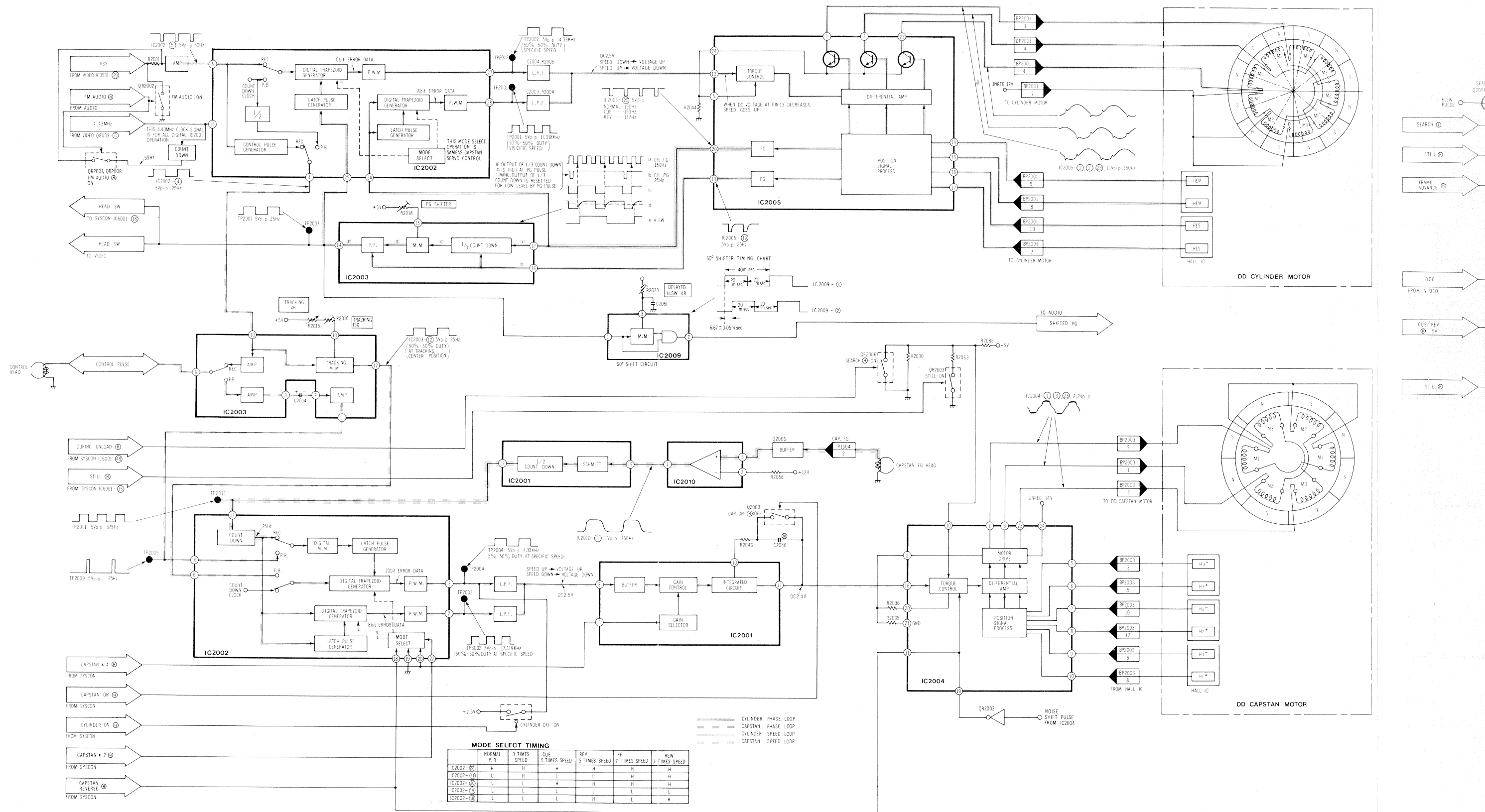


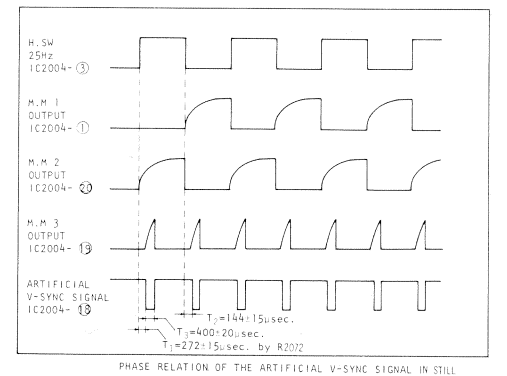
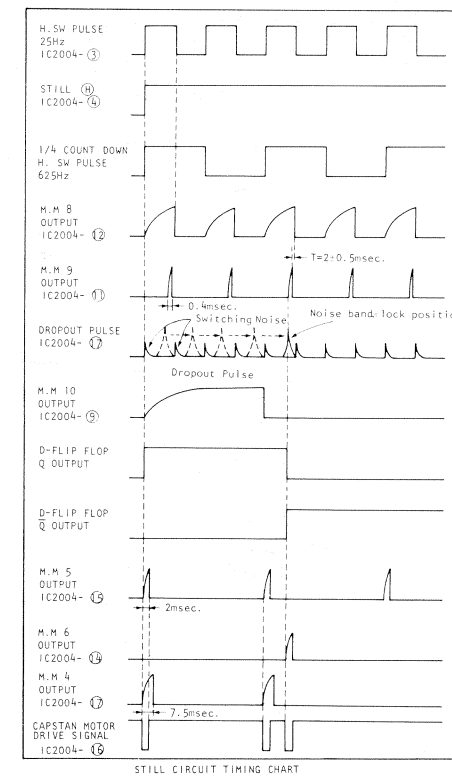
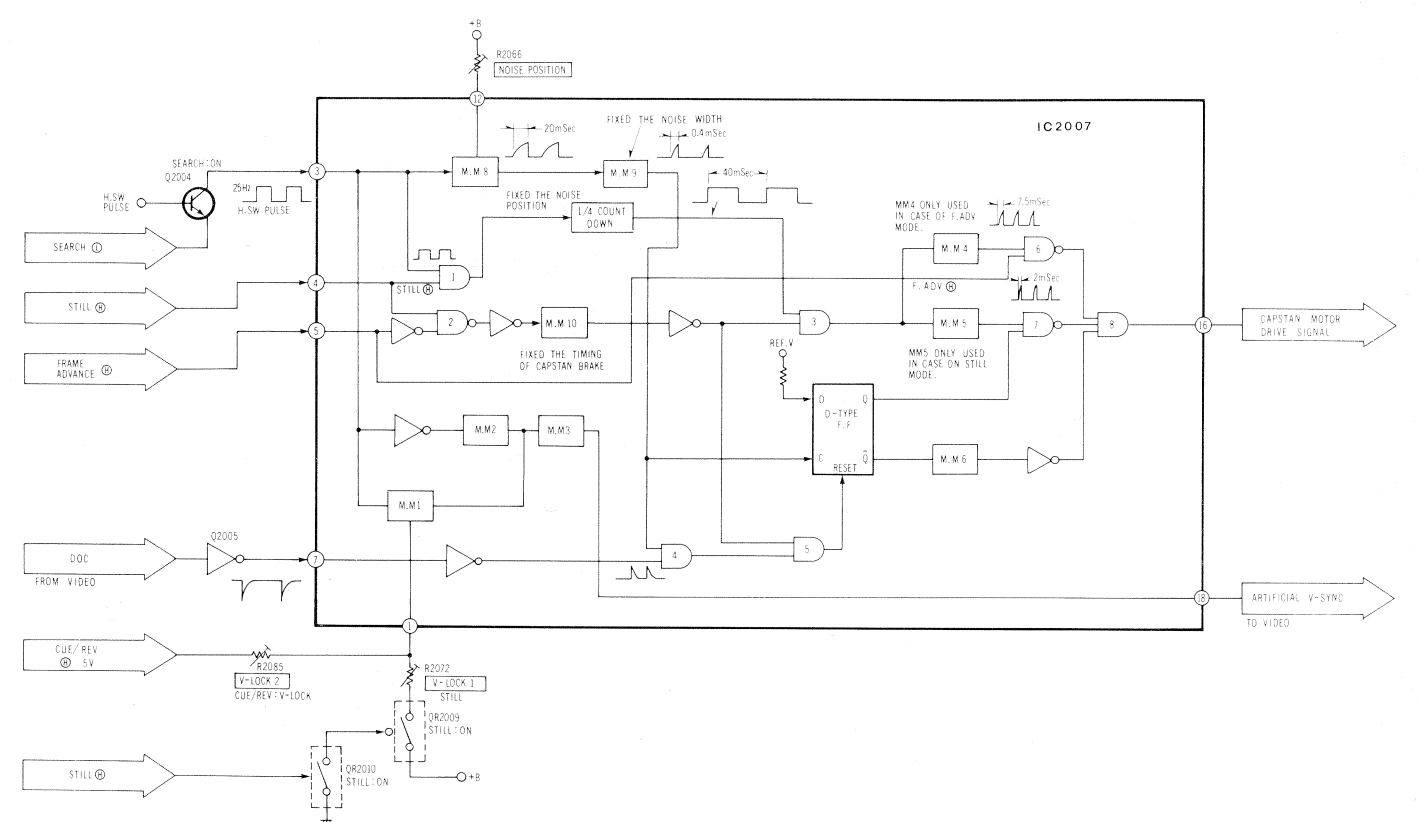
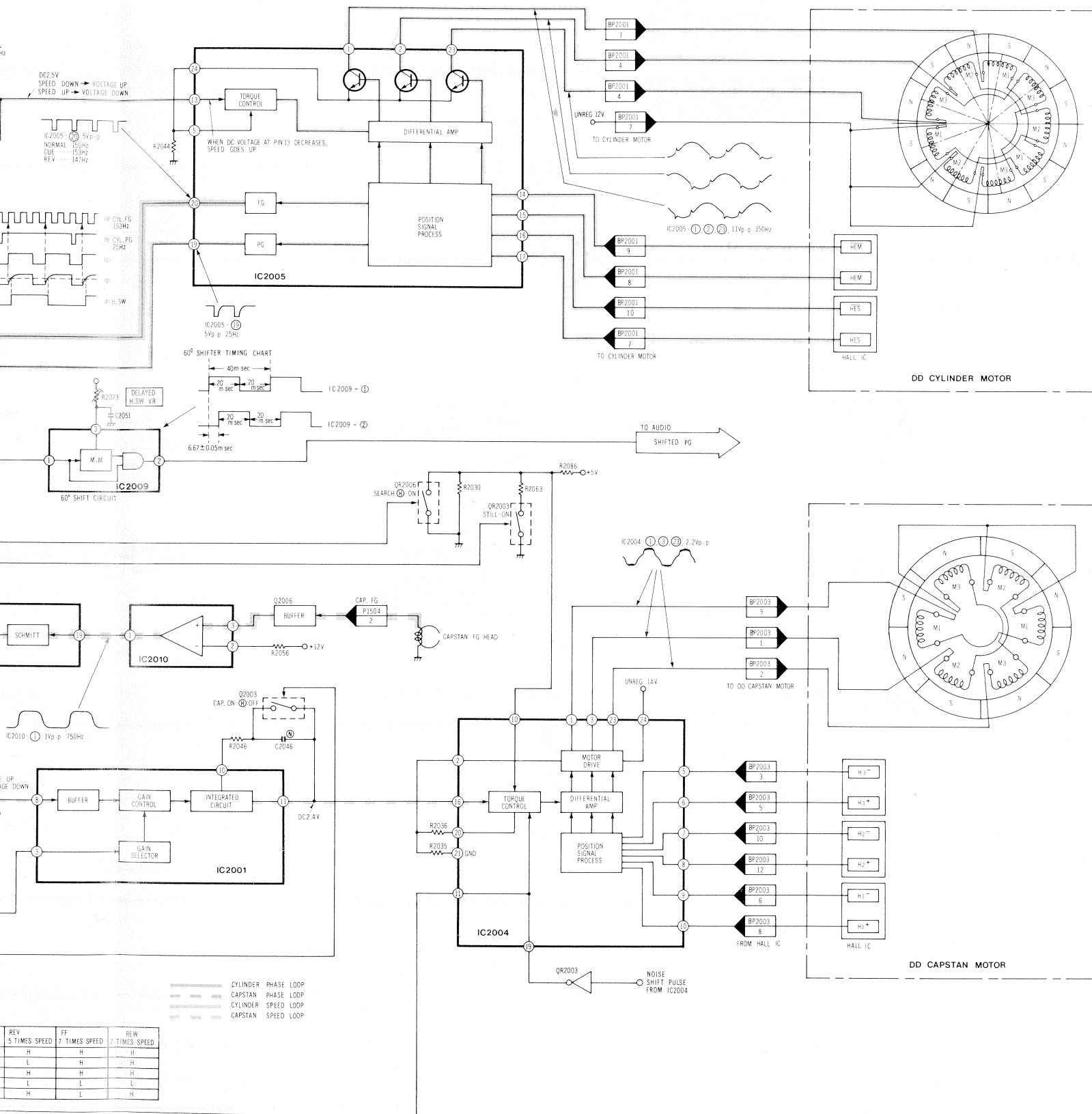
3-3. CHROMINANCE PROCESS BLOCK DIAGRAM



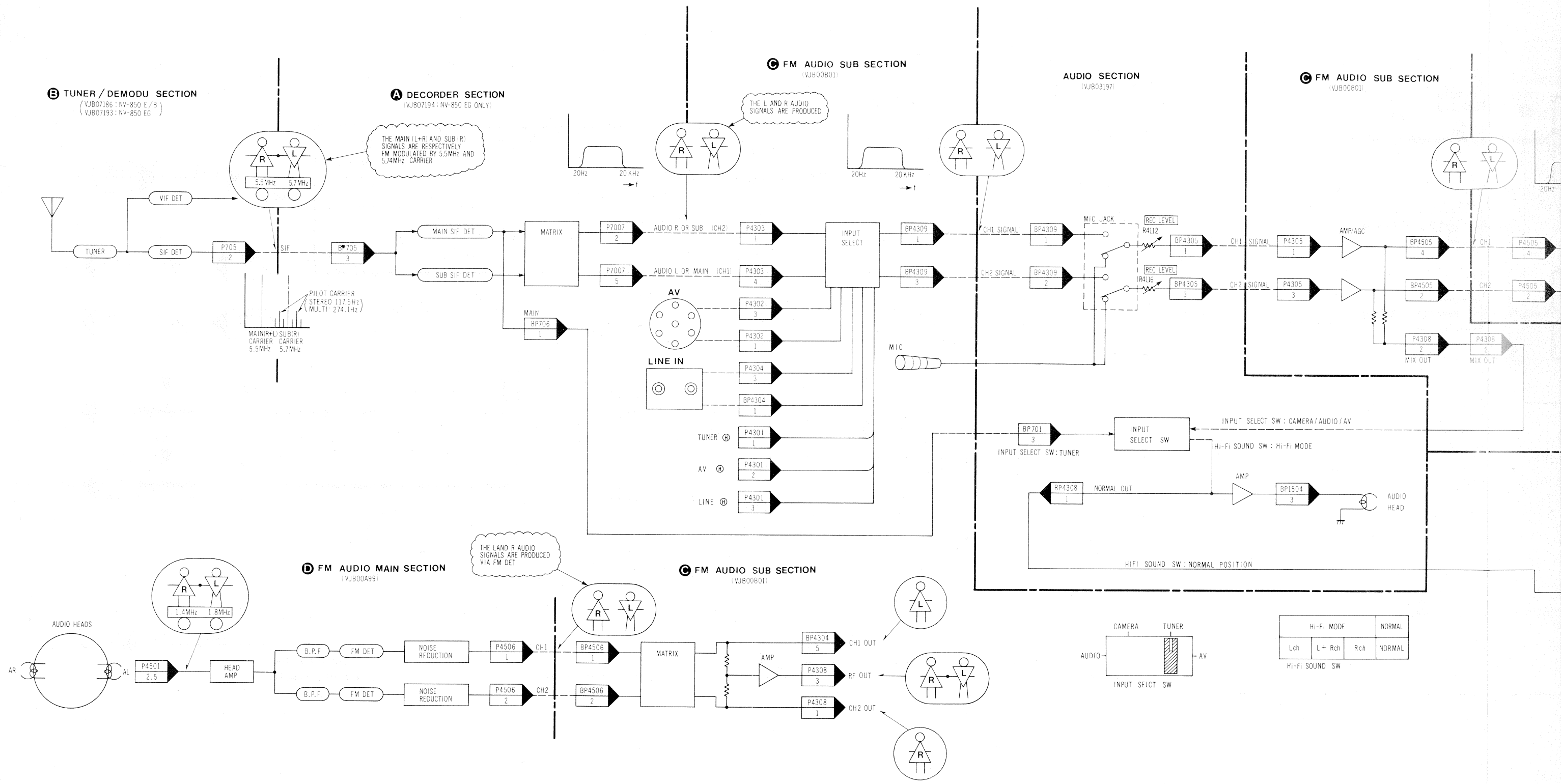


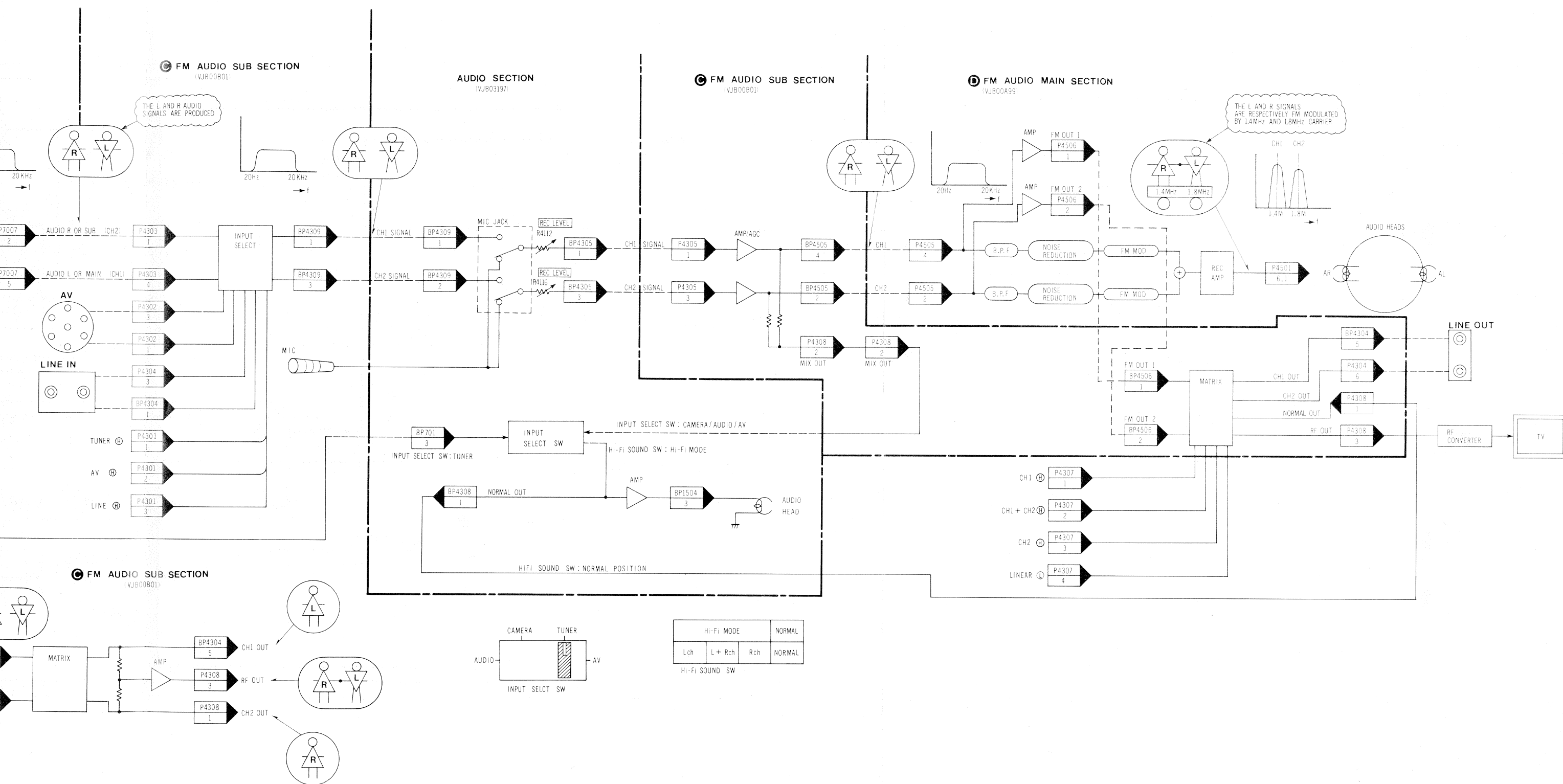
3-4. SERVO BLOCK DIAGRAM



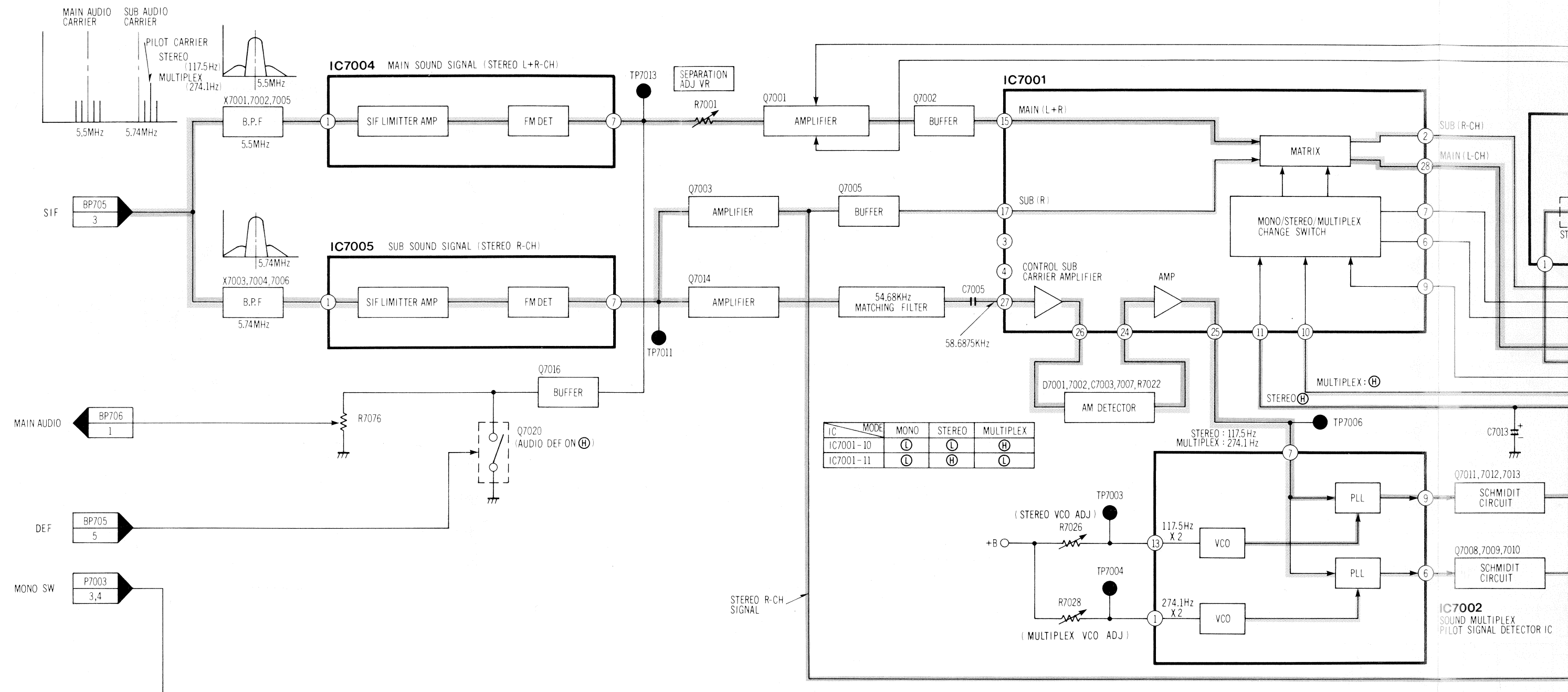


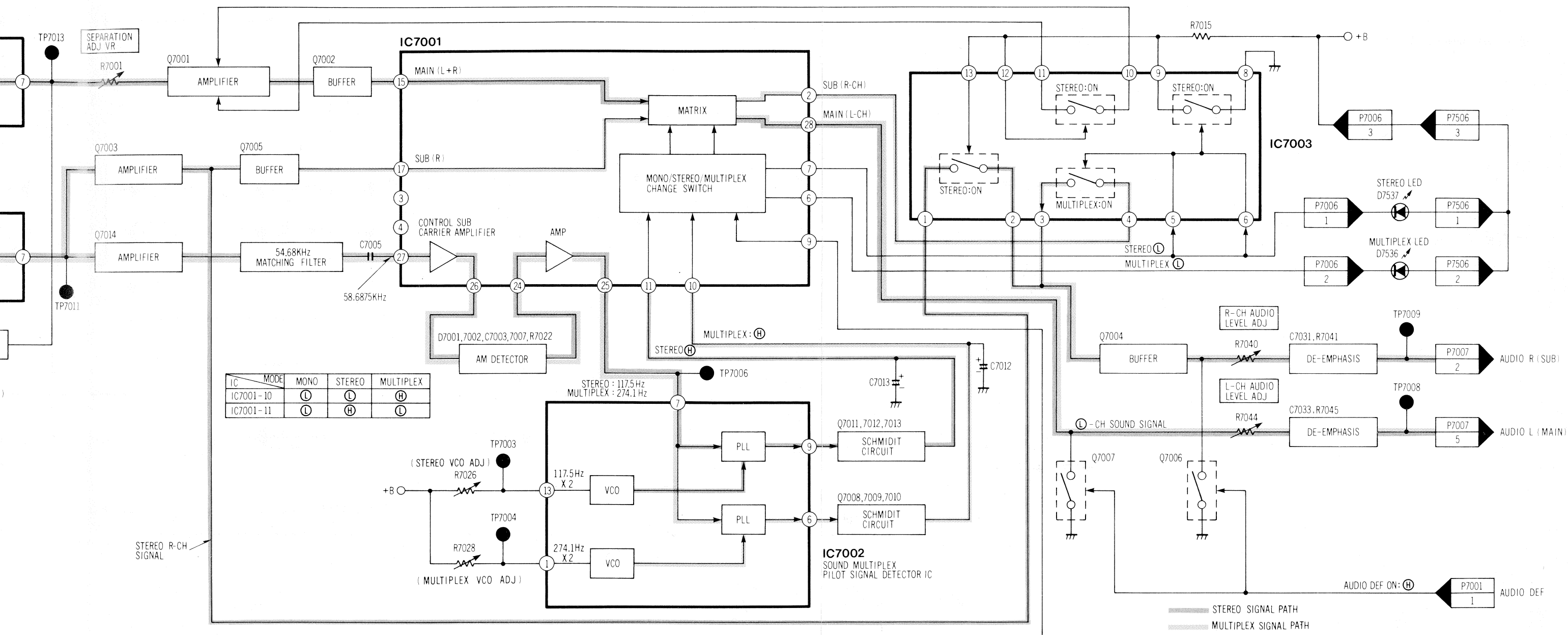
3-5. AUDIO OVERALL BLOCK DIAGRAM



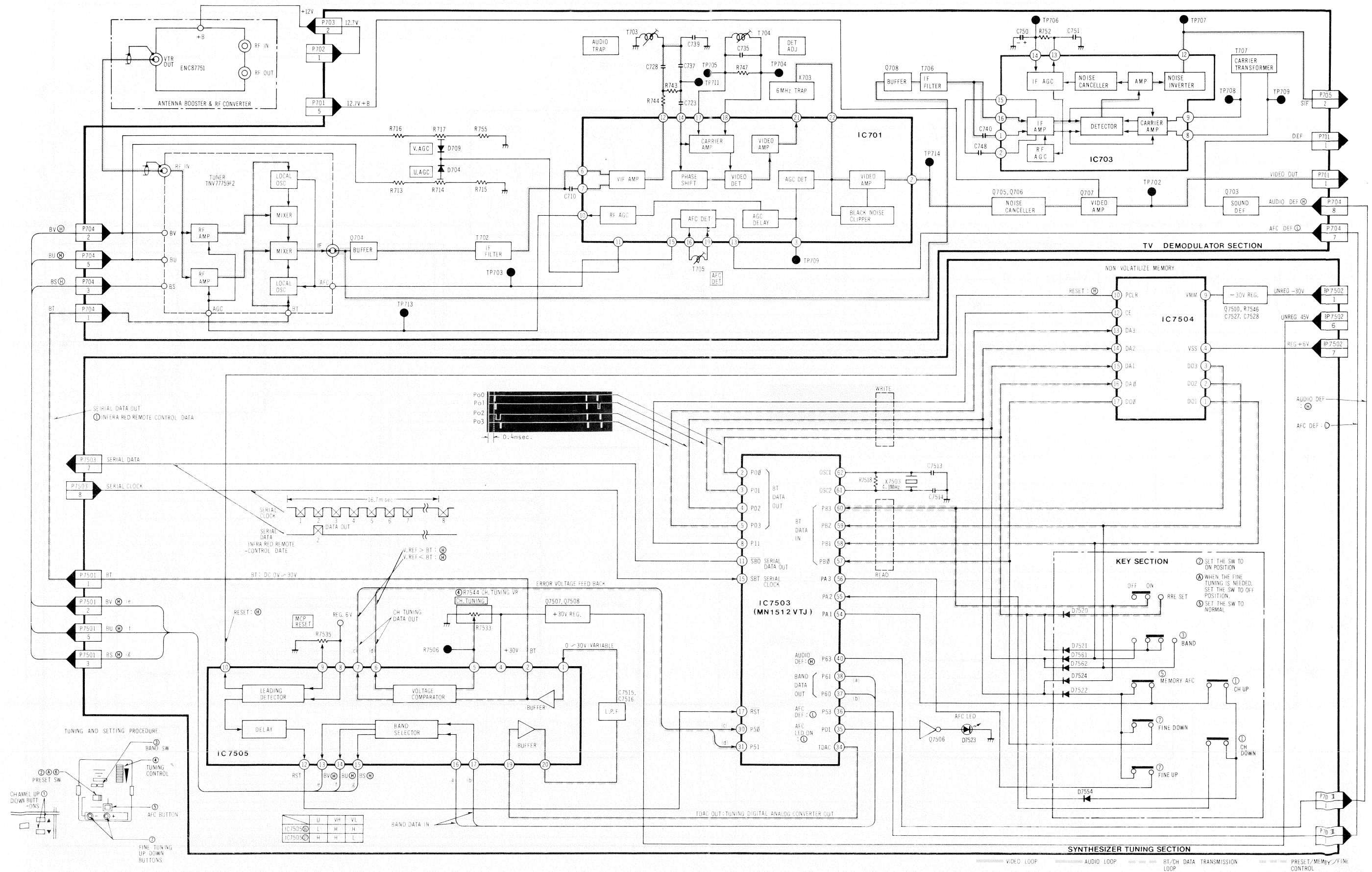


A DECODER BLOCK DIAGRAM (NV-850EG)

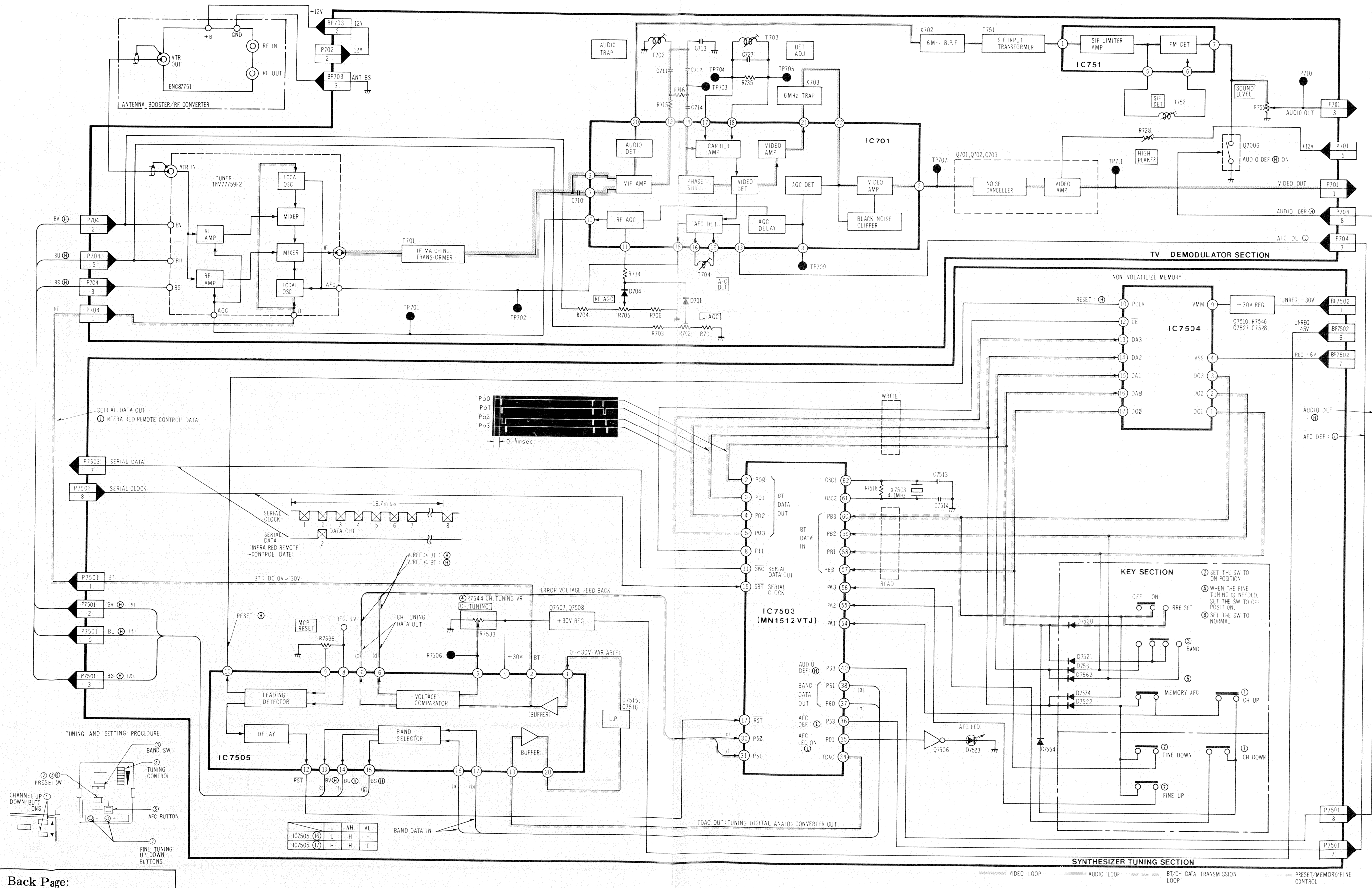




② TUNER/DEMODU BLOCK DIAGRAM (NV-850EG)

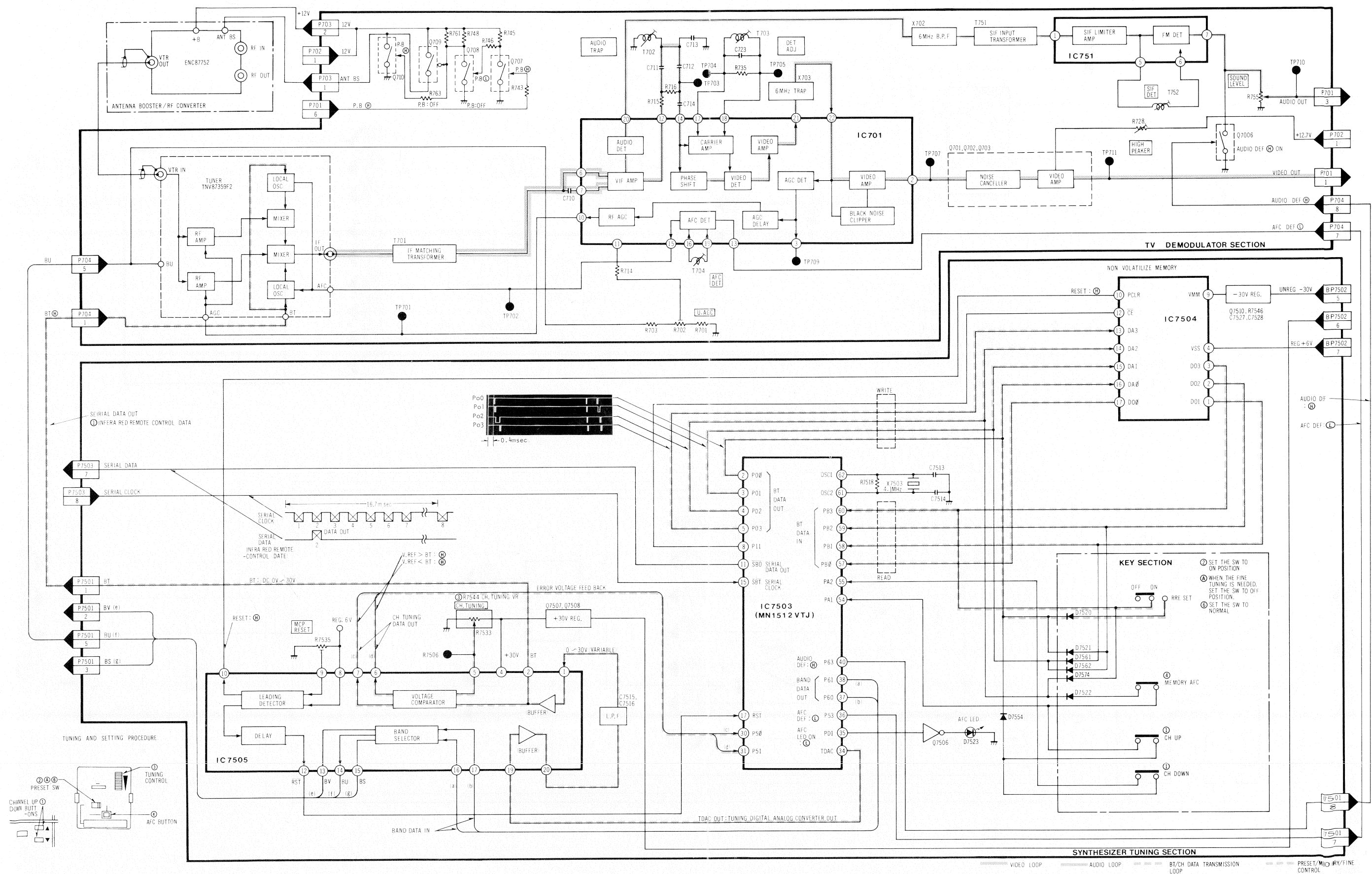


B TUNER/DEMODU BLOCK DIAGRAM (NV-850E)

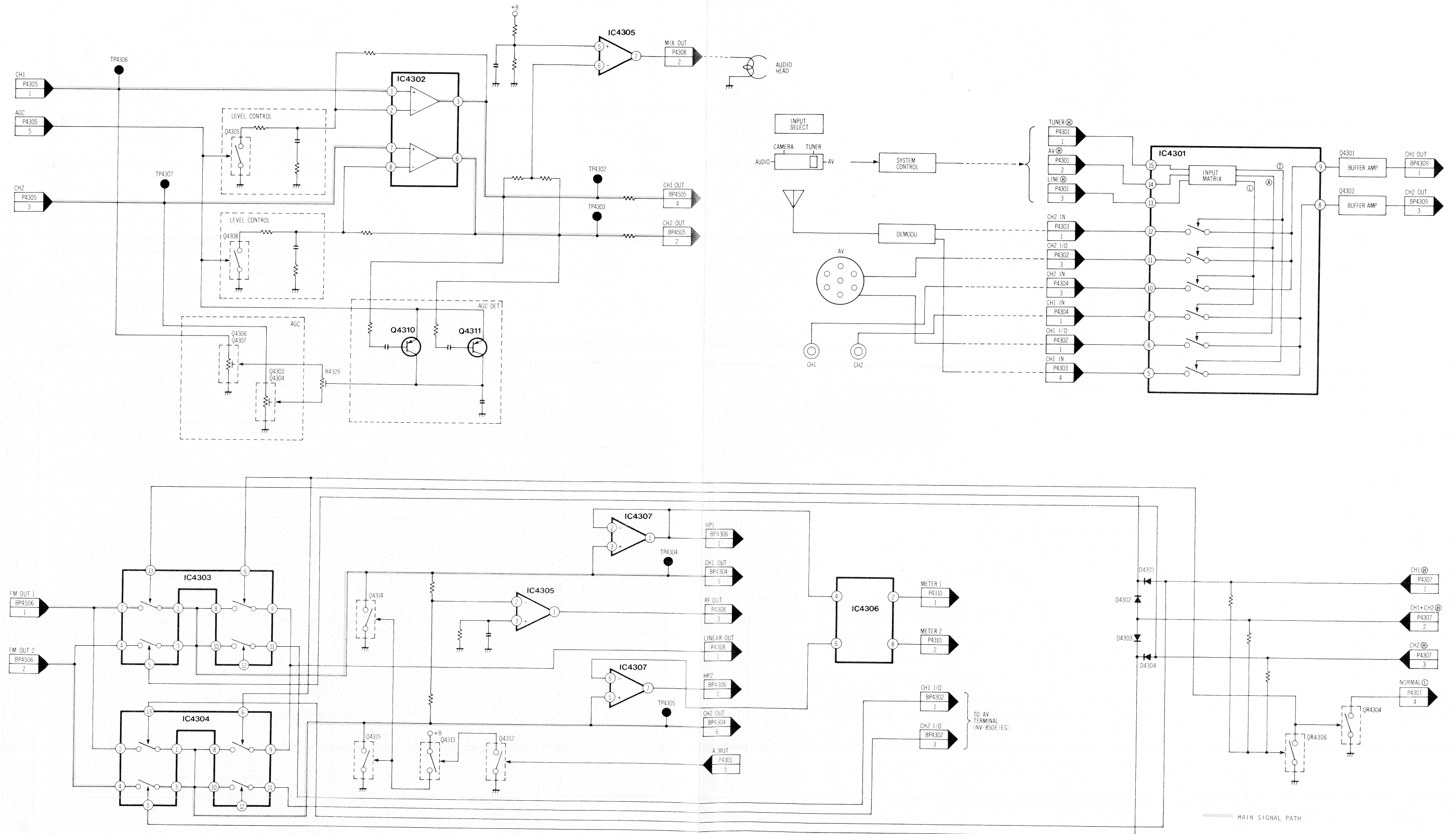


Back Page:
TUNER/DEMODU Section

Ⓑ TUNER/DEMODU BLOCK DIAGRAM (NV-850B)

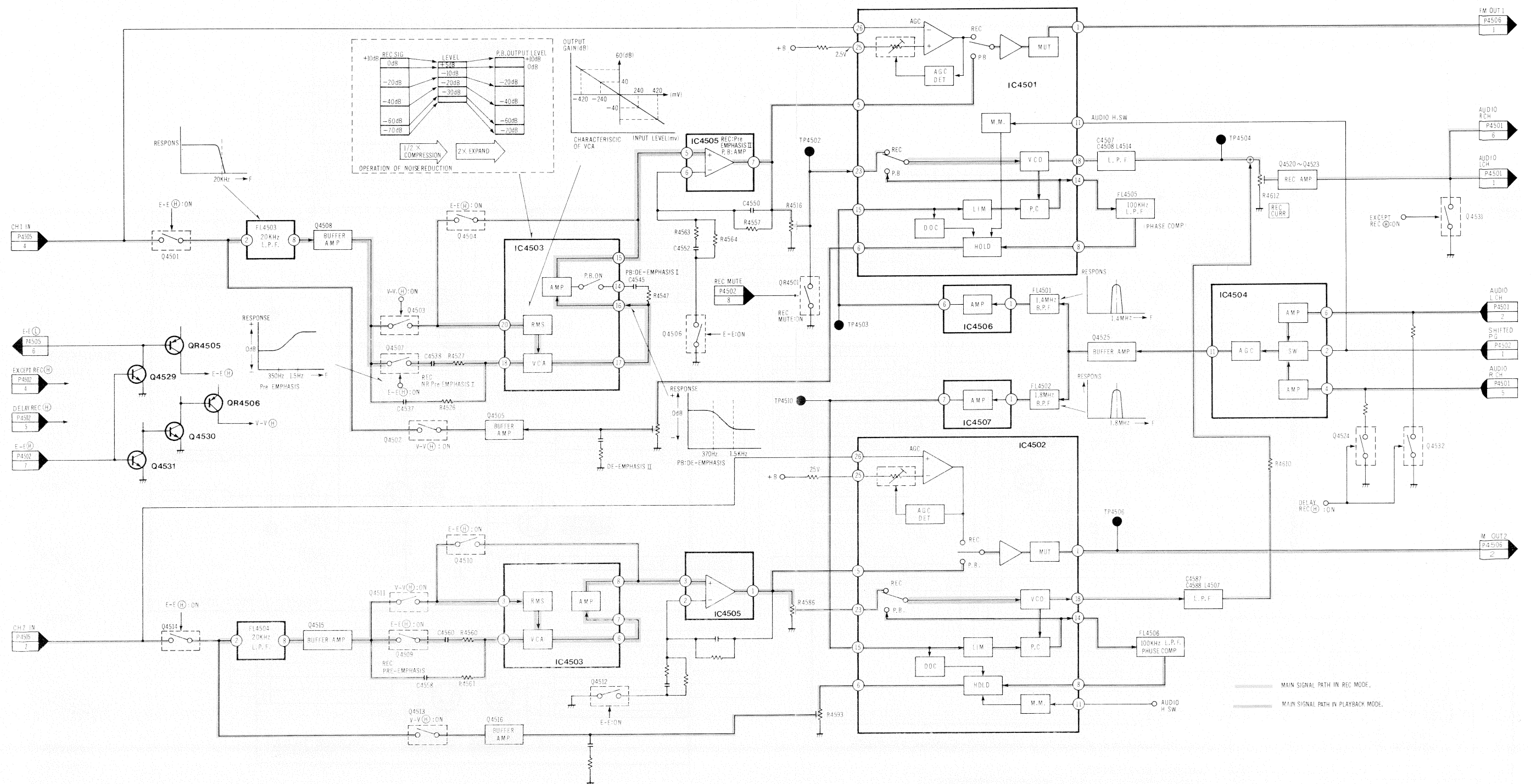


© FM AUDIO SUB BLOCK DIAGRAM

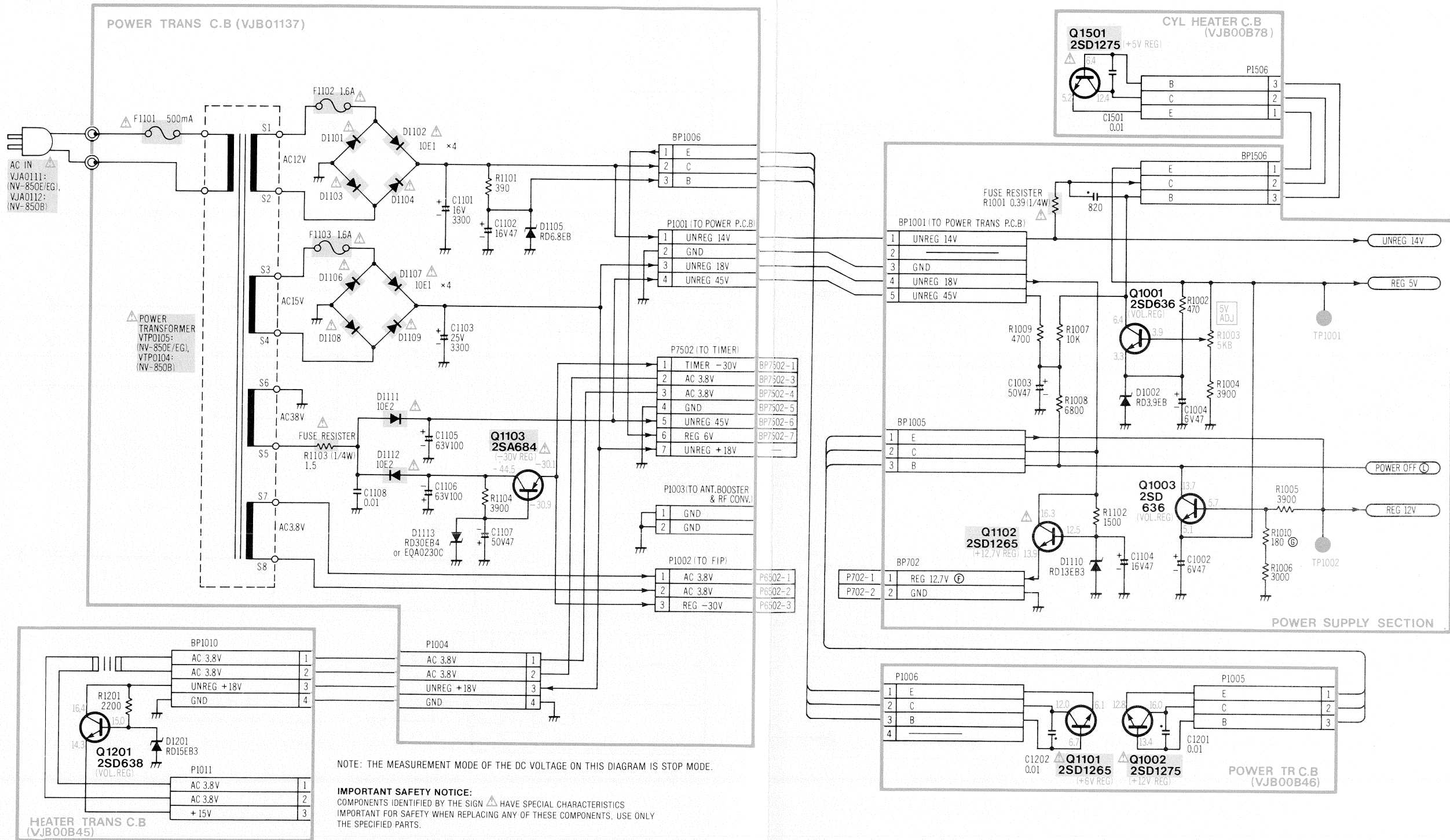


Back Page:
TUNER/DEMODO Section

FM AUDIO MAIN BLOCK DIAGRAM



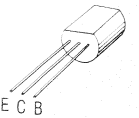
3-6. POWER SUPPLY SCHEMATIC DIAGRAM



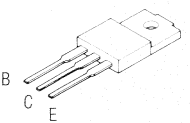
TRANSISTORS
INFORMATION



2SD636
2SD638

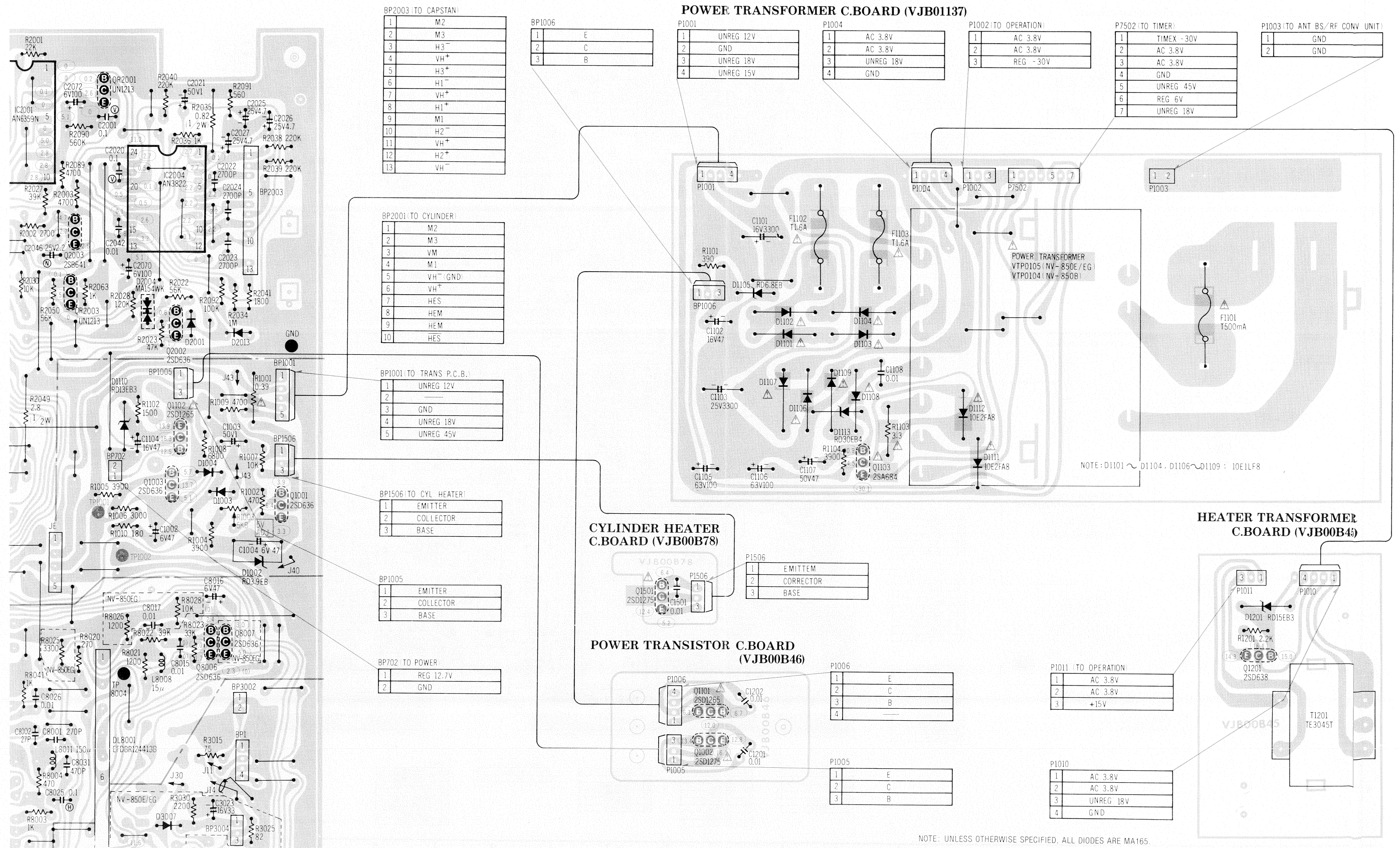


2SA684

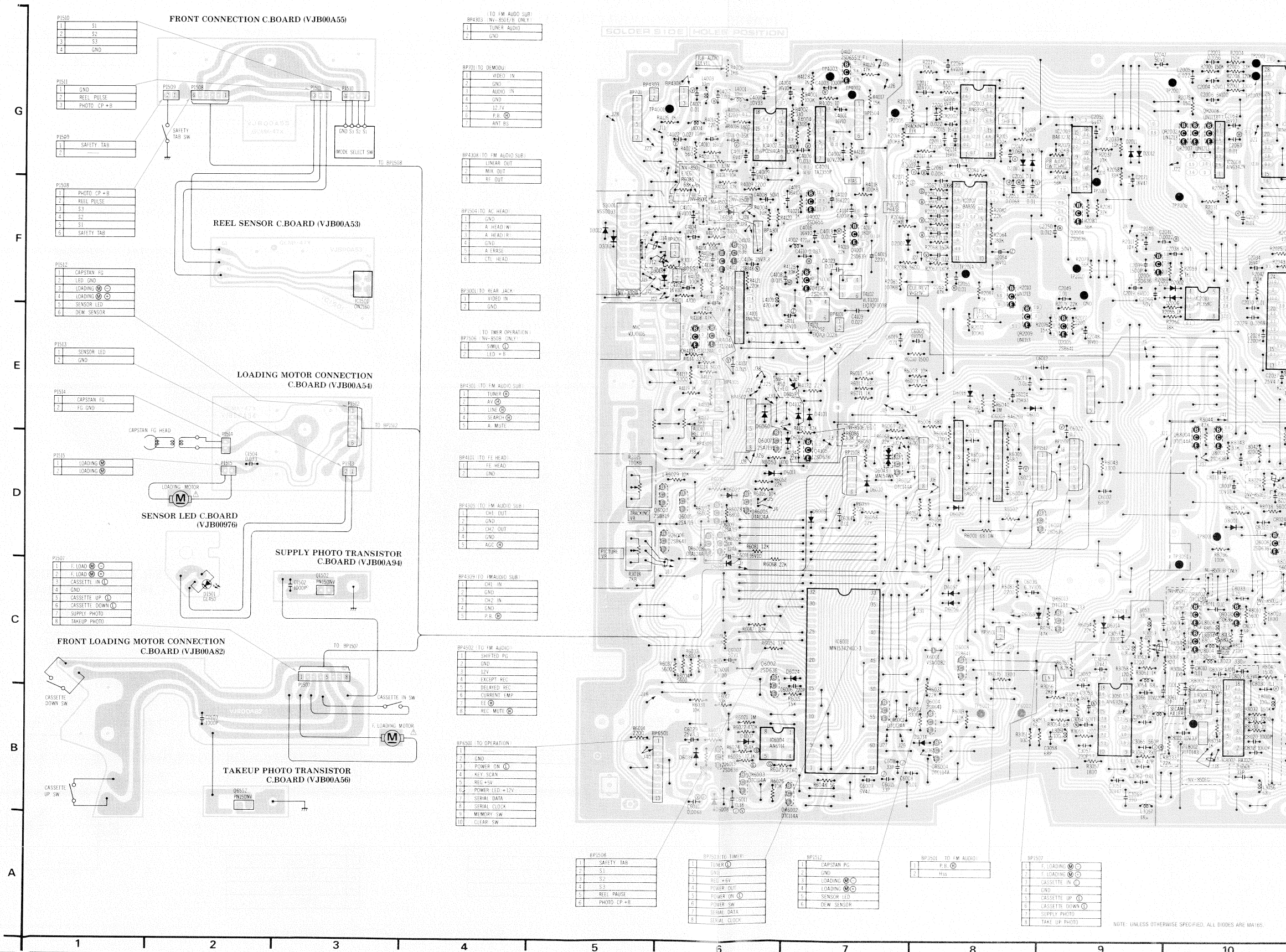


2SD1265
2SD1275

3-7. POWER SUPPLY Section In Main Circuit Board (VEP03197A: NV-850EG/VEP03197B: NV-850B/VEP03197C/ NV-850E)



3-8. SYSTEM CONTROL Section In Main Circuit Board (VEP03197A: NV-850EG/VEP03197B: NV-850B/VEP03197C: NV-850E)



SYSTEM CONTROL CIRCUIT BOARD	
Transistor	
Q1502	C-3
Q6001	D-9
Q6002	C-6
Q6003	D-6
Q6005	D-6
Q6006	D-6
Q6007	D-6
Q6008	C-8
Q6009	D-6
Q6012	B-6
Q6552	B-2
Transistor & Resistor	
QR6001	B-7
QR6002	B-7
QR6003	B-6
QR6004	B-8
QR6005	D-6
QR6006	D-6
QR6008	D-6
QR6012	D-7
QR6013	B-9
Integrated Circuit	
IC6001	C-7
IC6002	D-8
IC6003	D-8
IC6004	B-6
Test Point	
TP6001	B-8
TP6002	B-8

ADDRESS INFORMATION

Back Page:
POWER SUPPLY Section

SYSTEM CONTROL ICs D.C. VOLTAGE CHART

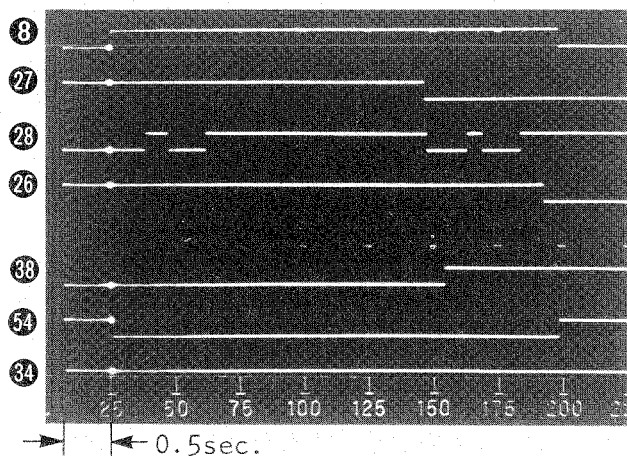
REF. NO.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	4.9	4.9	0	4.1	0	0	0	0	3.7	5.0	4.9	4.7	0.5	4.8	4.9	2.7	0	0.2	3.0
PLAY	0	4.9	4.9	0	4.1	0	0	0	0	3.7	5.0	4.7	4.7	0.5	4.7	4.9	2.7	2.5	2.5	3.0
REC	0	4.9	4.9	0	4.1	0	0	0	0	3.7	5.0	4.9	4.7	0.5	4.8	4.9	2.7	2.5	2.5	3.0
F.F	0	4.9	4.9	0	4.1	0	0	0	0	3.7	5.0	4.9	4.7	0.5	4.9	4.9	2.7	0	2.2	3.0
REW	0	4.9	4.9	0	4.1	0	0	0	0	3.7	5.0	4.9	4.7	0.5	4.8	4.9	2.7	0	2.2	3.0
REF. NO.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	3.0	0.1	0	0	5.1	4.2	4.8	0	0.5	4.9	4.9	0	0	0.1	0.2	0.1	0.1	0.2	0.1	0.1
PLAY	3.0	0.1	0	0	5.1	0	0	5.0	0.5	4.9	4.9	0	0	4.9	0.2	0.1	0.1	4.9	0.1	0.1
REC	3.0	0.1	0	0	5.1	0	0	5.0	0.5	4.9	4.9	0	0	4.9	0.2	0.1	0.1	4.9	0.1	0.1
F.F	3.0	0.1	0	0	5.1	4.8	4.8	0	0.5	4.9	4.9	0	0	0.2	0.2	4.8	0.1	4.8	0	4.8
REW	3.0	0.1	0	0	5.1	4.7	4.8	0	0.5	4.9	4.9	0	0	0.2	0.2	4.8	0.1	4.8	4.8	4.8
REF. NO.	IC6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	0.1	0.1	12.3	12.3	4.7	0	4.9	0.1	0.1	4.9	0.1	0.1	0.2	4.8	4.9	4.9	0.1	4.3	4.5	0.2
PLAY	0.1	0.1	12.3	12.3	4.7	4.9	4.9	0.1	0.1	4.9	0.1	0.1	0.2	4.8	4.9	4.9	0.1	4.3	4.5	0.2
REC	0.1	0.2	0.3	0.3	4.7	4.9	4.9	0.1	0.1	4.9	0.1	0.1	0.2	4.8	4.9	4.9	0.1	4.3	4.5	0.2
F.F	0	12.3	12.3	12.2	4.7	4.9	4.9	0	0	4.9	0.1	0	0.7	4.8	4.9	4.9	0.1	4.3	4.4	0.1
REW	0	12.3	12.2	12.2	4.7	4.9	4.9	0	0	4.9	0.1	0	0.7	4.8	4.9	4.9	0.1	4.3	4.4	0.1
REF. NO.	IC6001																			
MODE	61	62	63	64																
STOP	0.1	2.1	2.3	4.9																
PLAY	0.1	2.1	2.3	4.9																
REC	0.1	2.1	2.3	4.9																
F.F	0	2.1	2.2	4.9																
REW	0	2.1	2.2	4.9																
REF. NO.	IC6002																			
MODE	1	2	3	4	5	6	7	8	9	10										
STOP	0	0.5	0.9	10.3	0	0	12.4	12.2	0.9	0.5										
PLAY	0	0.5	0.9	10.3	0	0	12.4	11.8	0.9	0.5										
REC	0	0.5	0.9	10.3	0	0	12.4	11.9	0.9	0.5										
F.F	0	0.5	0.9	10.3	0	0	12.4	11.9	0.9	0.5										
REW	0	0.5	0.9	10.3	0	0	12.4	11.9	0.9	0.5										
REF. NO.	IC6003										IC6004									
MODE	1	2	3	4	5	6	7	8	9	10			1	2	3	4	5	6	7	8
STOP	0	0.5	0.9	5.7	0	0.5	12.4	11.8	0.9	0.5			4.9	0	2.4	0	0	0.4	0	5.1
PLAY	0	0.5	0.9	5.7	0	0.5	12.4	11.8	0.9	0.5			4.9	0	2.4	0	0	0.4	0	5.1
REC	0	0.5	0.9	5.7	0	0.4	12.4	11.8	0.9	0.5			4.9	0	2.4	0	0	0.4	0	5.1
F.F	0	0.5	0.9	5.7	0	0.5	12.4	11.8	0.9	0.5			4.9	0	2.4	0	0	0.4	0	5.1
REW	0	0.5	0.9	5.7	0	0.5	12.4	11.8	0.9	0.5			4.9	0	2.4	0	0	0.4	0	5.1

SYSTEM CONTROL TRANSISTORS DC VOLTAGE CHART

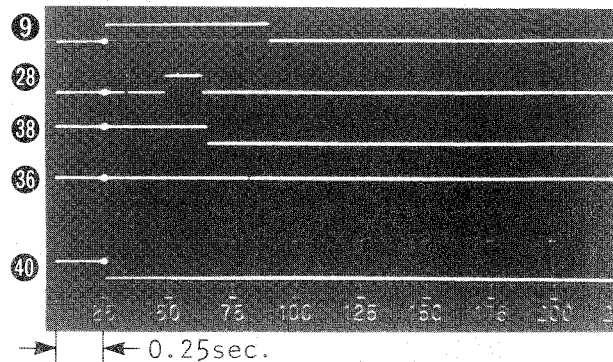
REF. NO.	Q6001			Q6002			Q6003			Q6004			Q6005			Q6006		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0.1	12.2	0.2	0	4.7	0.2	12.4	12.4	11.7	12.5	12.5	11.8	12.4	0	12.4	12.4	0.3	12.4
PLAY	0.2	11.8	0.2	0	4.7	0.2	12.4	12.4	11.7	12.5	12.5	11.8	12.4	0	12.4	12.4	0.3	12.4
REC	0.2	11.8	0.2	0	4.7	0.2	12.4	12.4	11.7	12.5	12.5	11.8	12.3	12.1	11.5	12.3	12.1	11.4
F.F	0.7	11.0	0.7	0	4.7	0.2	12.4	12.4	11.7	12.5	12.5	11.8	12.4	0	12.4	12.4	0.3	12.4
REW	0.7	11.0	0.7	0	4.7	0.2	12.4	12.4	11.7	12.5	12.5	11.8	12.4	0	12.4	12.4	0.3	12.4
REF. NO.	Q6007			Q6008			Q6009			Q6012								
MODE	E	C	B	E	C	B	E	C	B	E	C	B						
STOP	5.1	5.0	4.3	5.1	0	4.9	5.1	0	5.0	0	4.9	0						
PLAY	5.1	5.0	4.3	5.1	5.0	1.4	5.1	0	5.0	0	4.9	0						
REC	5.1	0	4.8	5.1	0	4.9	5.1	0	5.0	0	4.9	0						
F.F	5.1	5.0	4.3	5.1	0	4.9	5.1	0	5.0	0	4.9	0						
REW	5.1	5.0	4.3	5.1	0	4.9	5.1	0	5.0	0	4.9	0						
REF. NO.	QR6001			QR6002			QR6003			QR6004			QR6005			QR6006		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	0.1	4.8	0	0	4.5	0	0	4.3	0	13.8	0.1	5.1	0	4.9	5.1	5.0	0.1
PLAY	0	0.1	4.8	0	0	4.5	0	0	4.3	0	13.8	0.1	5.1	0	4.9	5.1	5.0	0.1
REC	0	0.1	4.8	0	0	4.5	0	0	4.3	0	13.8	0.1	5.1	5.0	0.1	5.1	5.0	0.1
F.F	0	0.1	4.8	0	0	4.5	0	0	4.3	0	13.8	0.1	5.1	0	4.9	5.1	5.0	0.1
REW	0	0.1	4.8	0	0	4.5	0	0	4.3	0	13.8	0.1	5.1	0	4.9	5.1	5.0	0.1
REF. NO.	QR6012			QR6013														
MODE	E	C	B	E	C	B												
STOP	0.2	0.2	3.7	0	0.1	0.6												
PLAY	4.9	4.7	4.8	0	0	2.7												
REC	4.9	4.7	4.8	0	0.1	0.6												
F.F	4.8	3.3	4.5	0	0.1	0.6												
REW	4.8	3.3	4.5	0	0.1	0.6												

MICROPROCESSOR (IC6001: MN15342VGC•3) MODE BY MODE TIMING CHART

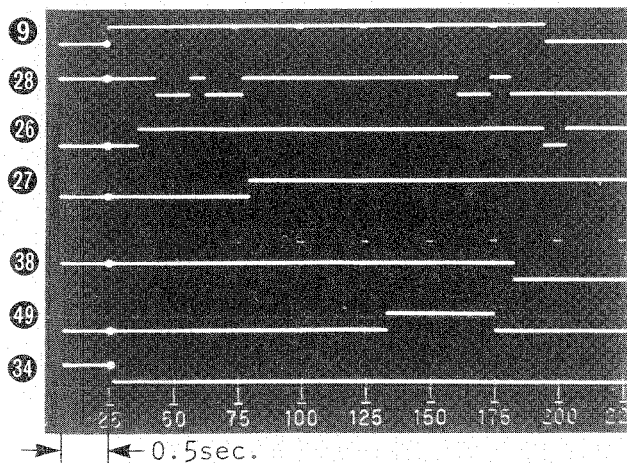
STOP → PLAY
IC Pin No.



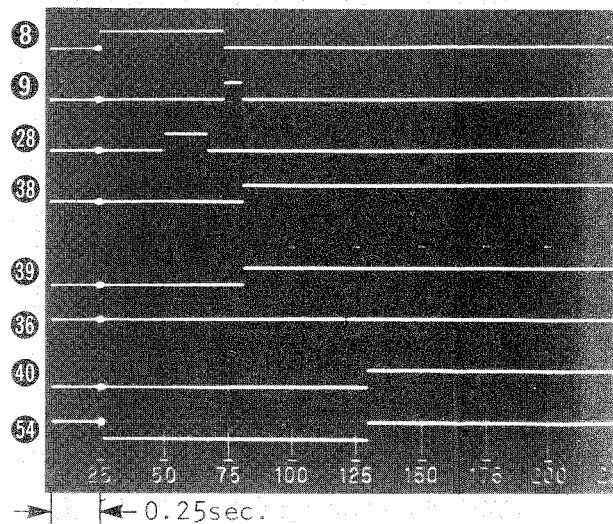
FF → STOP
IC Pin No.



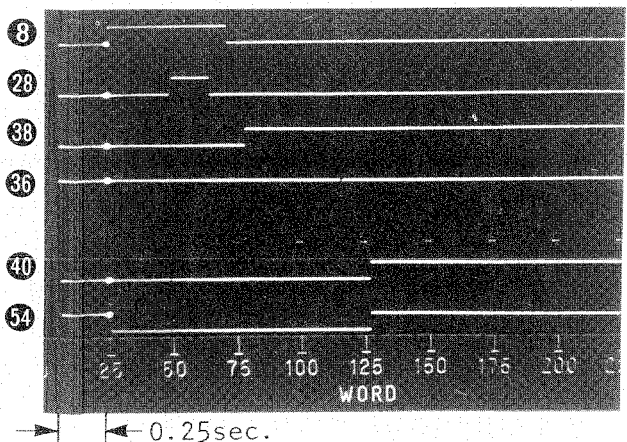
PLAY → STOP
IC Pin No.



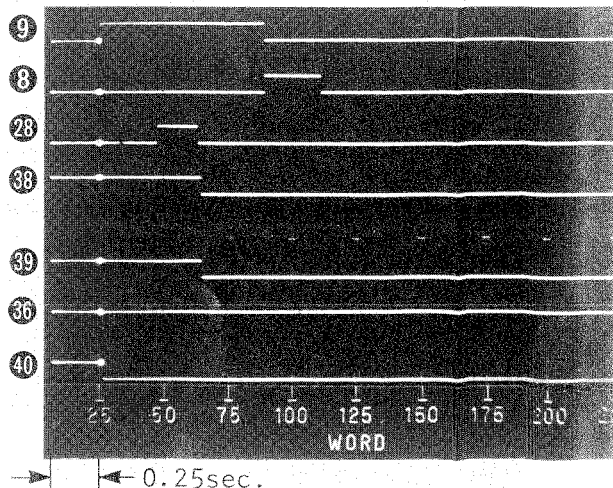
STOP → REW
IC Pin No.



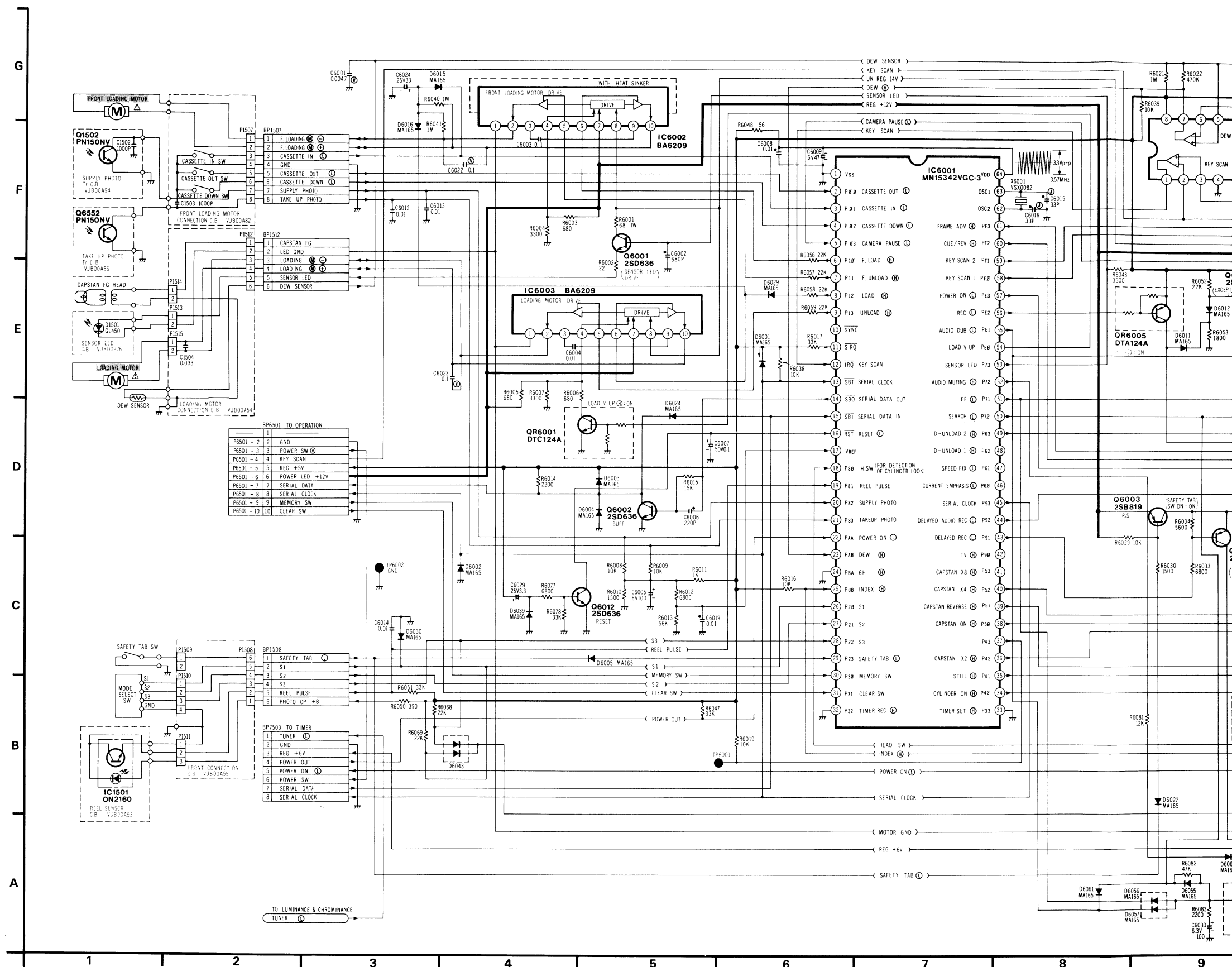
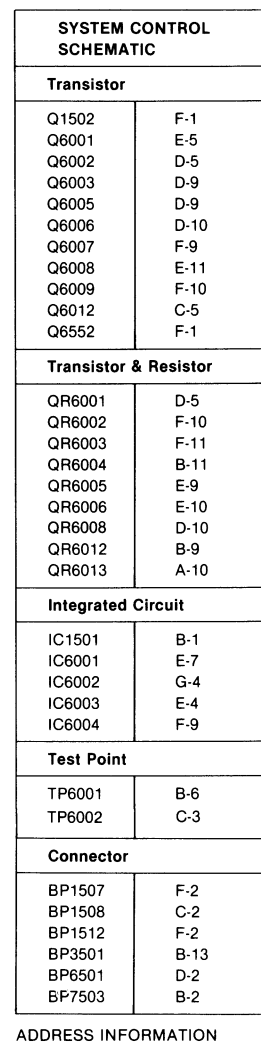
STOP → FF
IC Pin No.



REW → STOP
IC Pin No.



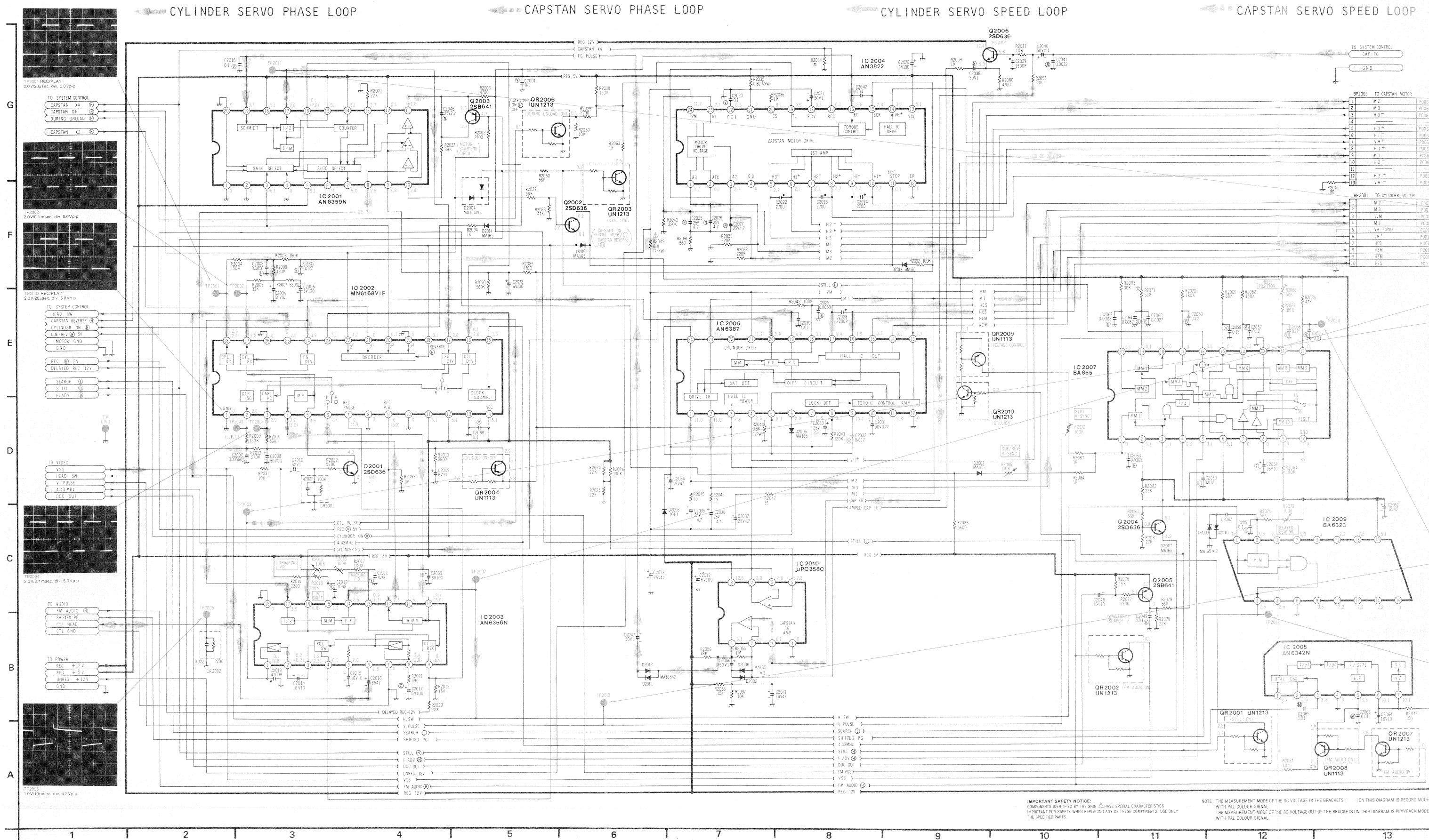
3-9. SYSTEM CONTROL SCHEMATIC DIAGRAM



SYSTEM CONTROL Section



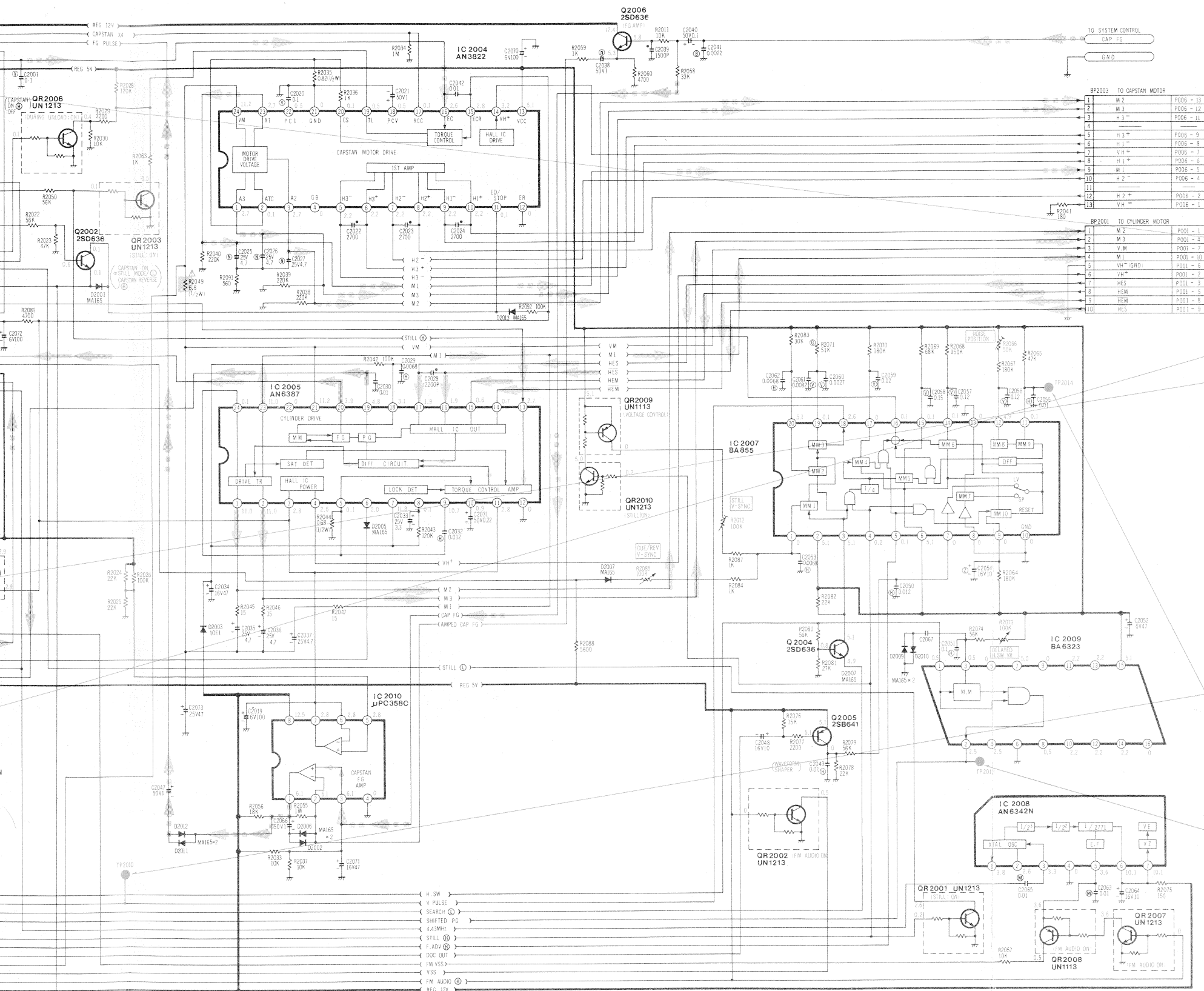
3-10. SERVO SCHEMATIC DIAGRAM



CAPSTAN SERVO PHASE LOOP

CYLINDER SERVO SPEED LOOP

CAPSTAN SERVO SPEED LOOP



IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN HAVE SPECIAL CHARACTERISTICS
IMPORTANT FOR SAFETY WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY
THE SPECIFIED PARTS.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS () ON THIS DIAGRAM IS RECORD MODE
WITH PAL COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE
WITH PAL COLOUR SIGNAL.

SERVO SCHEMATIC

Transistor

Q2001	D-4
Q2002	F-6
Q2003	G-5
Q2004	C-11
Q2005	C-11
Q2006	G-10

Transistor & Resistor

QR2001	A-12
QR2002	B-11
QR2003	F-6
QR2004	D-5
QR2006	G-6
QR2007	B-13
QR2008	B-13
QR2009	E-9
QR2010	D-9

Integrated Circuit

IC2001	G-3
IC2002	E-3
IC2003	B-3
IC2004	G-8
IC2005	E-8
IC2007	E-11
IC2008	B-13
IC2009	C-12
IC2010	C-7

Test Point

TP2001	F-2
TP2002	F-3
TP2003	D-3
TP2004	D-3
TP2005	B-2
TP2007	C-5
TP2009	C-3
TP2010	B-10
TP2011	G-3
TP2013	C-12
TP2014	E-13
TP GND	D-1

Adjustment

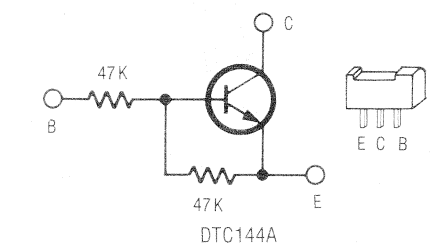
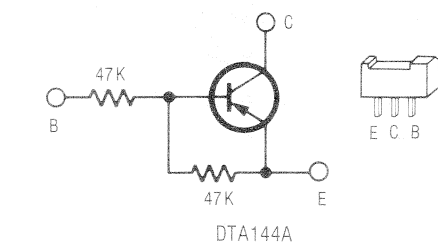
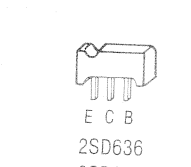
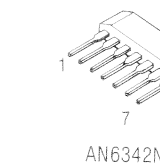
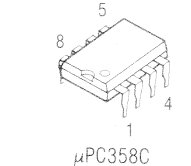
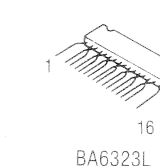
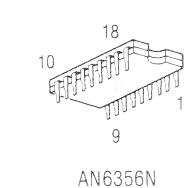
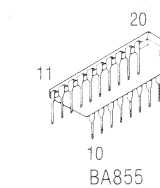
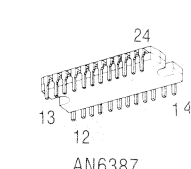
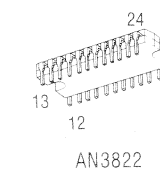
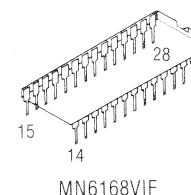
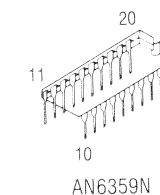
R2015	C-3
R2016	C-3
R2018	C-3
R2066	E-12
R2072	D-10
R2073	C-12
R2085	D-10

Connector

BP2001	F-13
BP2003	G-13

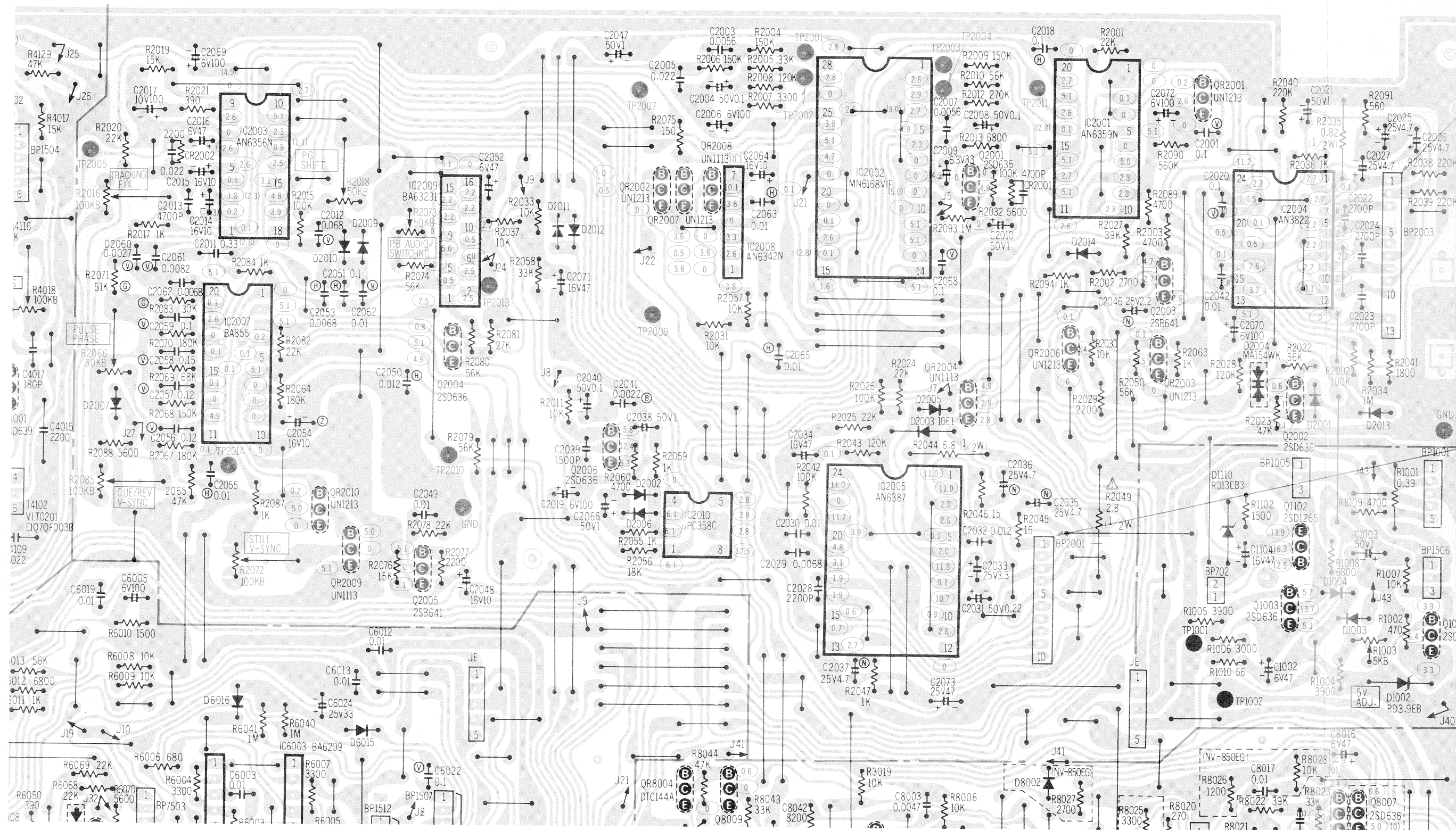
ADDRESS INFORMATION

ICs & TRANSISTORS INFORMATION



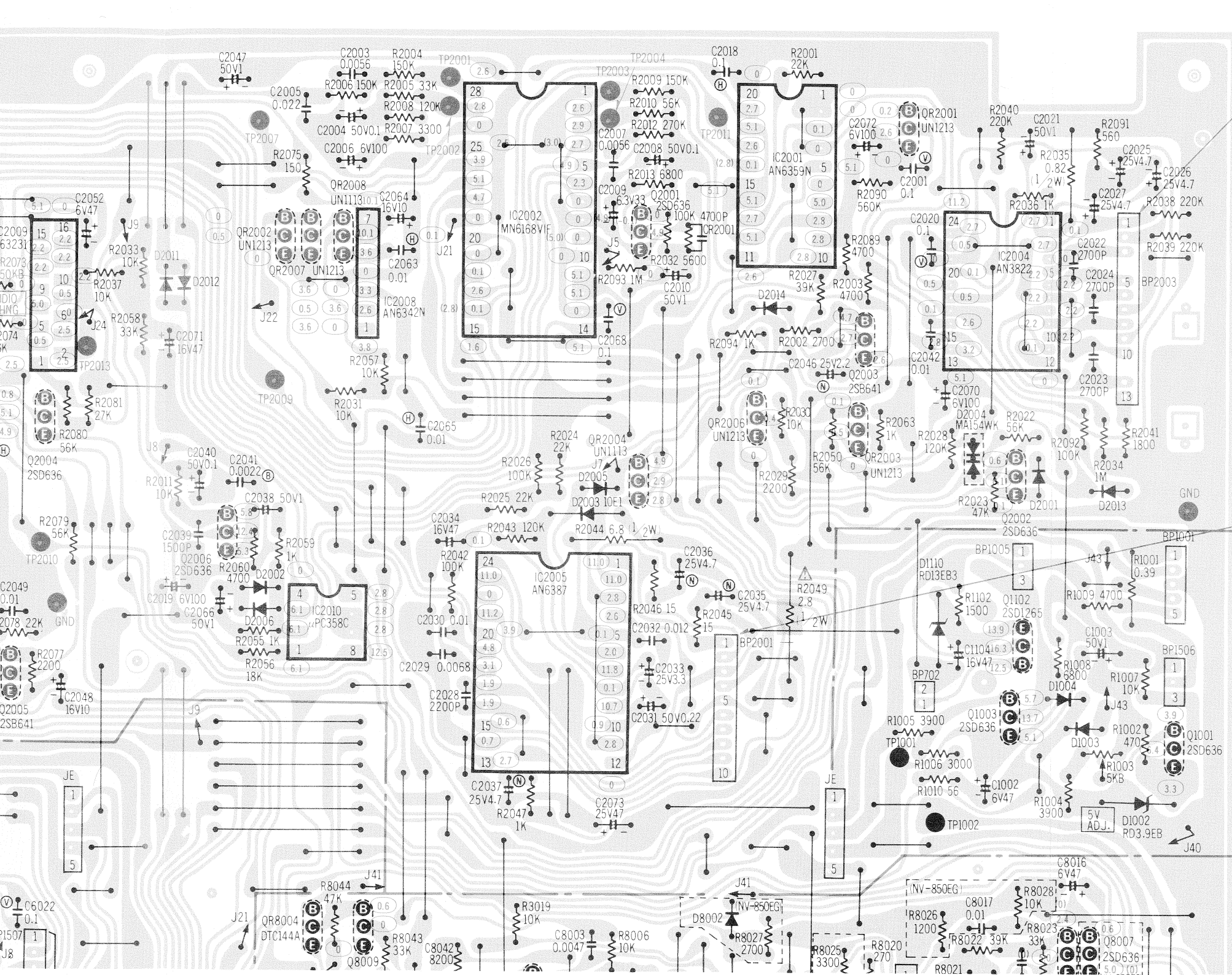
3-11. SERVO Section In Main Circuit Board

(VEP03197A: NV-850EG/VEP03197B: NV-850B/VEP03197C: NV-850E)



NOTE: UNLESS OTHERWISE SPECIFIED, ALL DIODES ARE MA165.

VEP03197C: NV-850E)



BP2003 (TO CAPSTAN)

1	M2
2	M3
3	H3 ⁻
4	VH ⁺
5	H3 ⁺
6	H1 ⁻
7	VH ⁺
8	H1 ⁺
9	M1
10	H2 ⁻
11	VH ⁺
12	H2 ⁺
13	VH ⁻

BP2001 (TO CYLINDER)

1	M2
2	M3
3	VM
4	M1
5	VH ⁻ (GND)
6	VH ⁺
7	HES
8	HEM
9	HEM
10	HES

BP1001 (TO TRANS P.C.B.)

1	UNREG 12V
2	
3	GND
4	UNREG 18V
5	UNREG 45V

BP1506 (TO CYL HEATER)

1	EMITTER
2	COLLECTOR
3	BASE

BP1005

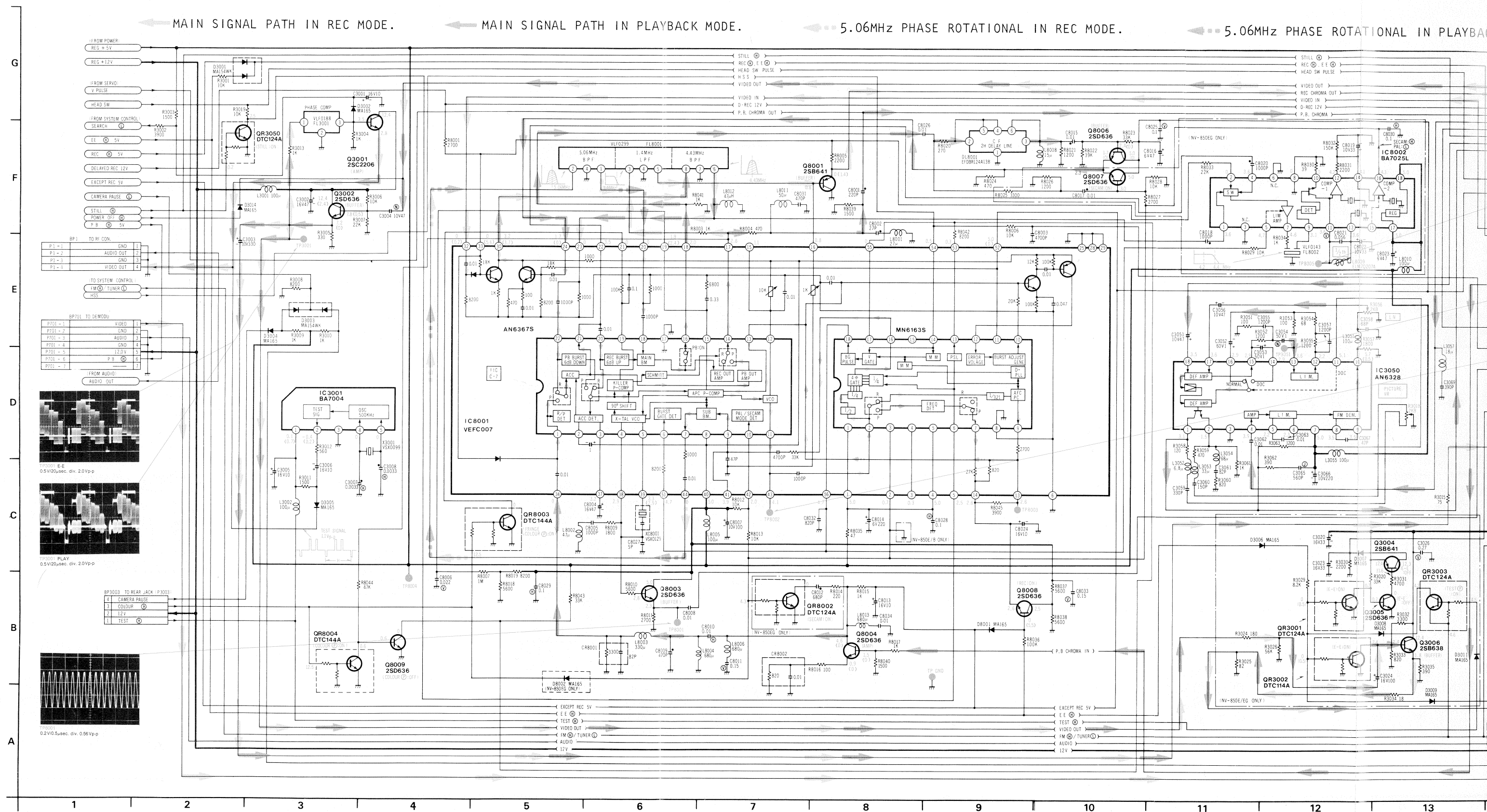
1	EMITTER
2	COLLECTOR
3	BASE

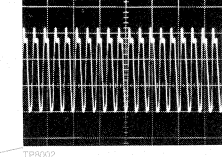
SERVO CIRCUIT BOARD	
Transistor	
Q2001	G-11
Q2002	F-12
Q2003	F-12
Q2004	F-9
Q2005	E-9
Q2006	F-9
Transistor & Resistor	
QR2001	G-12
QR2002	G-10
QR2003	F-12
QR2004	F-11
QR2006	F-11
QR2007	G-10
QR2008	G-10
QR2009	E-8
QR2010	F-8
Integrated Circuit	
IC2001	G-11
IC2002	G-10
IC2003	G-8
IC2004	G-12
IC2005	F-11
IC2007	F-8
IC2008	G-10
IC2009	G-9
IC2010	F-10
Test Point	
TP2001	G-10
TP2002	G-10
TP2003	G-11
TP2004	G-11
TP2005	G-7
TP2007	G-10
TP2009	F-10
TP2010	F-9
TP2011	G-11
TP2013	F-9
TP2014	F-8
TP GND	F-9
Adjustment	
R2015	D-5
R2016	G-7
R2018	G-8
R2066	F-7
R2072	E-8
R2073	G-9
R2085	F-7

ADDRESS INFORMATION

NOTE: UNLESS OTHERWISE SPECIFIED, ALL DIODES ARE MA165.

3-12. LUMINANCE (1) & CHROMINANCE SCHEMATIC DIAGRAM

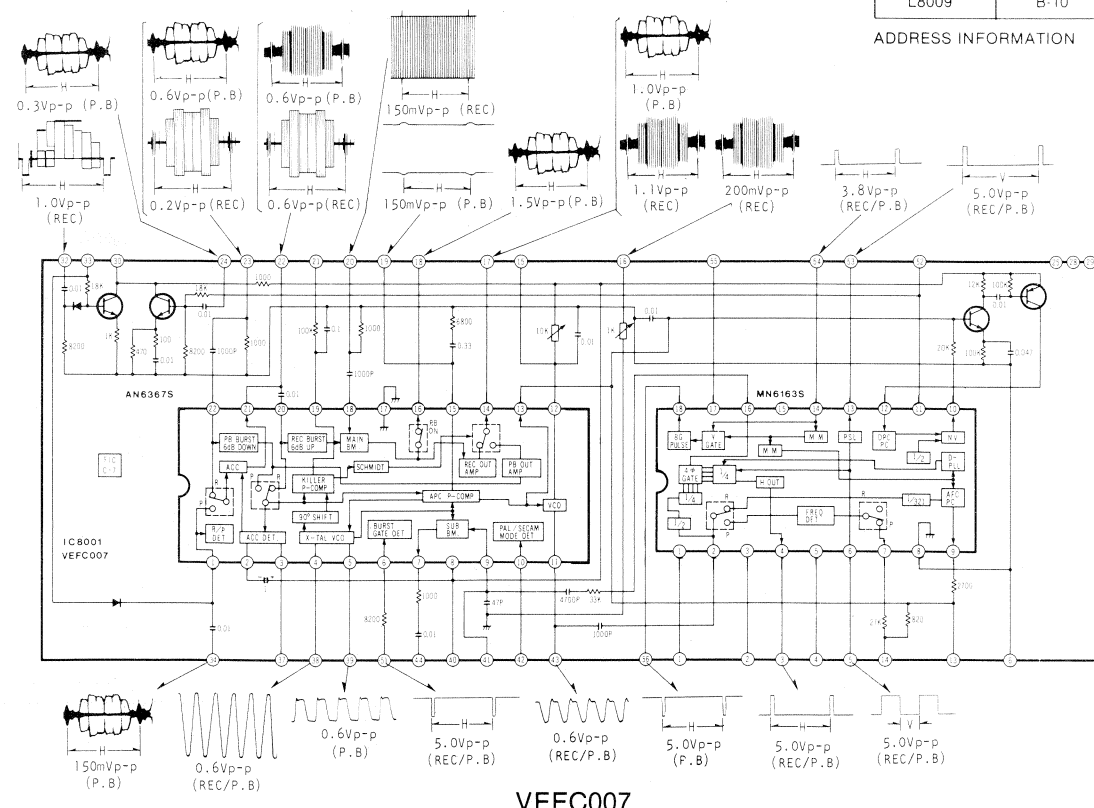
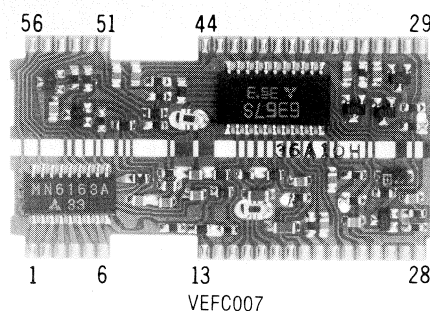
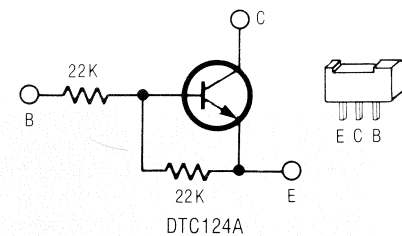
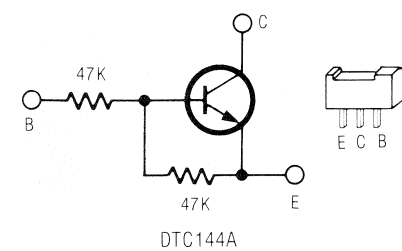




LUMINANCE, CHROMINANCE SCHEMATIC	
Transistor	
Q3001	G-4
Q3002	F-3
Q3004	B-13
Q3005	B-13
Q3006	B-13
Q8001	F-8
Q8003	B-6
Q8004	B-8
Q8006	F-10
Q8007	F-10
Q8008	B-9
Q8009	B-4
Transistor & Resistor	
QR3001	B-12
QR3002	B-12
QR3003	B-13
QR3050	F-3
QR8002	B-7
QR8003	C-5
QR8004	B-3
Integrated Circuit	
IC3001	D-3
IC3050	D-12
IC8001	D-5
IC8002	F-12
Test Point	
TP3001	E-3
TP3051	E-12
TP8001	B-6
TP8002	C-7
TP8003	C-9
TP8004	B-4
TP8005	E-12
TP GND	B-9
Adjustment	
R3018	D-13
R3056	E-12
L8009	E-12
Connector	
BP1	E-1
BP701	E-1
BP3001	B-15
BP3002	D-15
BP3003	B-2
BP3004	D-15
BP7506	A-15
JSA	E-15
JSB	F-15
JSC	F-15
JSD	F-15

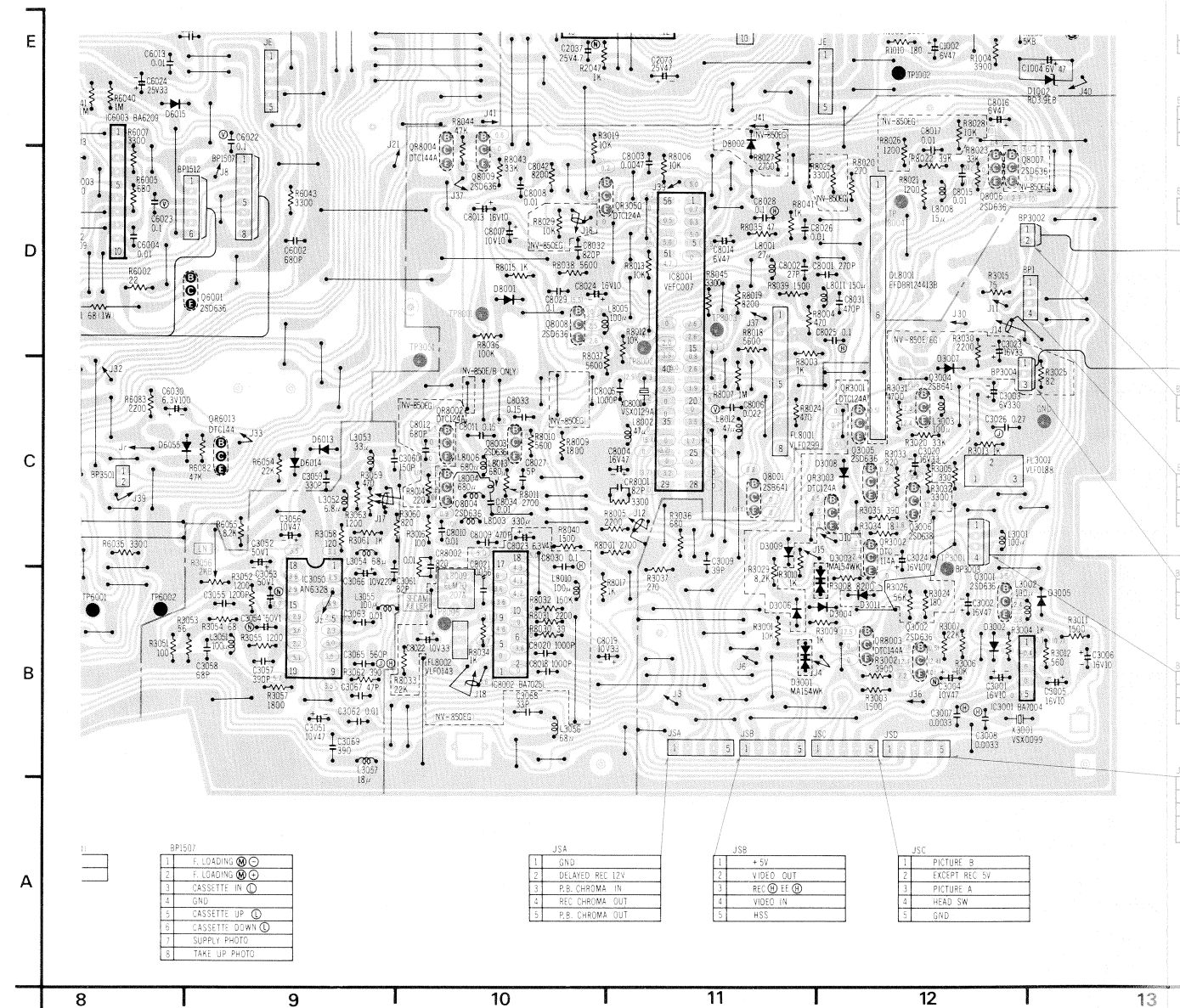
ADDRESS INFORMATION

ICs & TRANSISTORS INFORMATION



VEFC007

3-13. LUMINANCE (1) & CHROMINANCE Section In Main Circuit Board (VEP03197A: NV-850EG/VEP03197B: NV-850B/VEP03197C: NV-850E)



BP1507	
1	F. LOADING
2	F. LOADING
3	CASSETTE IN
4	GND
5	CASSETTE UP
6	CASSETTE DOWN
7	SUPPLY PHOTO
8	TAKE UP PHOTO

JSA	
1	GND
2	DELAYED REC 12V
3	P.B. CHROMA IN
4	REC CHROMA OUT
5	P.B. CHROMA OUT

JSB	
1	+5V
2	VIDEO OUT
3	REC. EF
4	VIDEO IN
5	HSS

JSC	
1	PICTURE B
2	EXCEPT REC 5V
3	PICTURE A
4	HEAD SW
5	GND

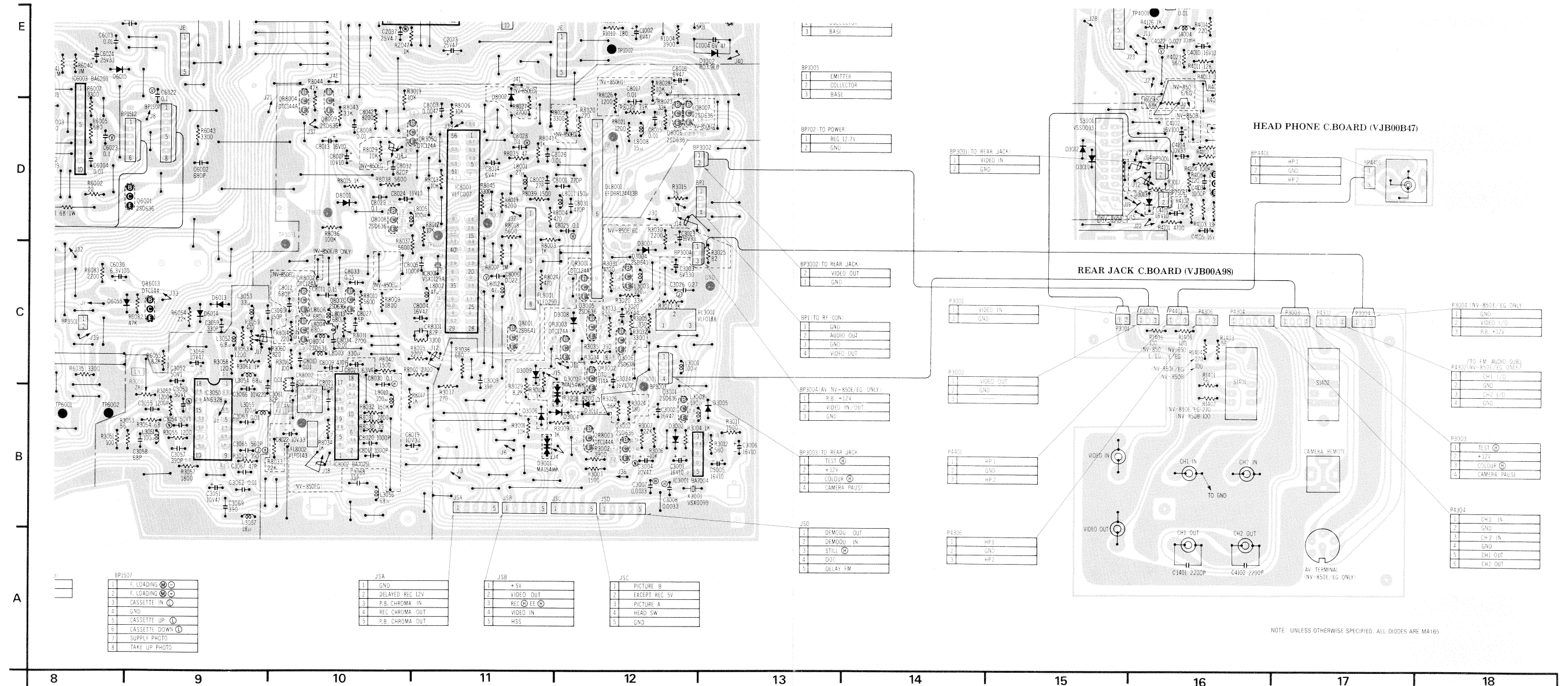
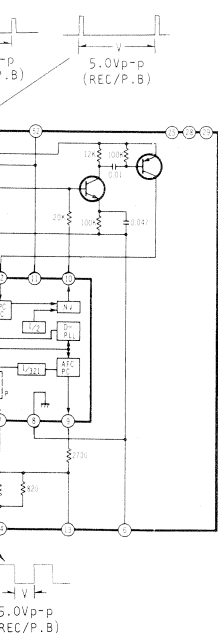
BP1005	
1	EMITTER
2	COLLECTOR
3	BASE
BP702 (TO POWER)	
1	REG 12.7V
2	GND
BP3002 (TO REAR JACK)	
1	VIDEO OUT
2	GND
3	GND
4	VIDEO OUT
BP3004 (NV-850E/EG ONLY)	
1	P.B. +12V
2	VIDEO IN/OUT
3	GND
BP3003 (TO REAR JACK)	
1	TEST
2	+12V
3	COLOUR
4	CAMERA PAUSE
JSD	
1	DEMODO OUT
2	DEMODO IN
3	STILL
4	DOZ
5	DELAY FM

3-13. LUMINANCE (1) & CHROMINANCE Section In Main Circuit Board (VEP03197A: NV-850EG/VEP03197B: NV-850B/VEP03197C: NV-850E)

LUMINANCE (1) & CHROMINANCE Section

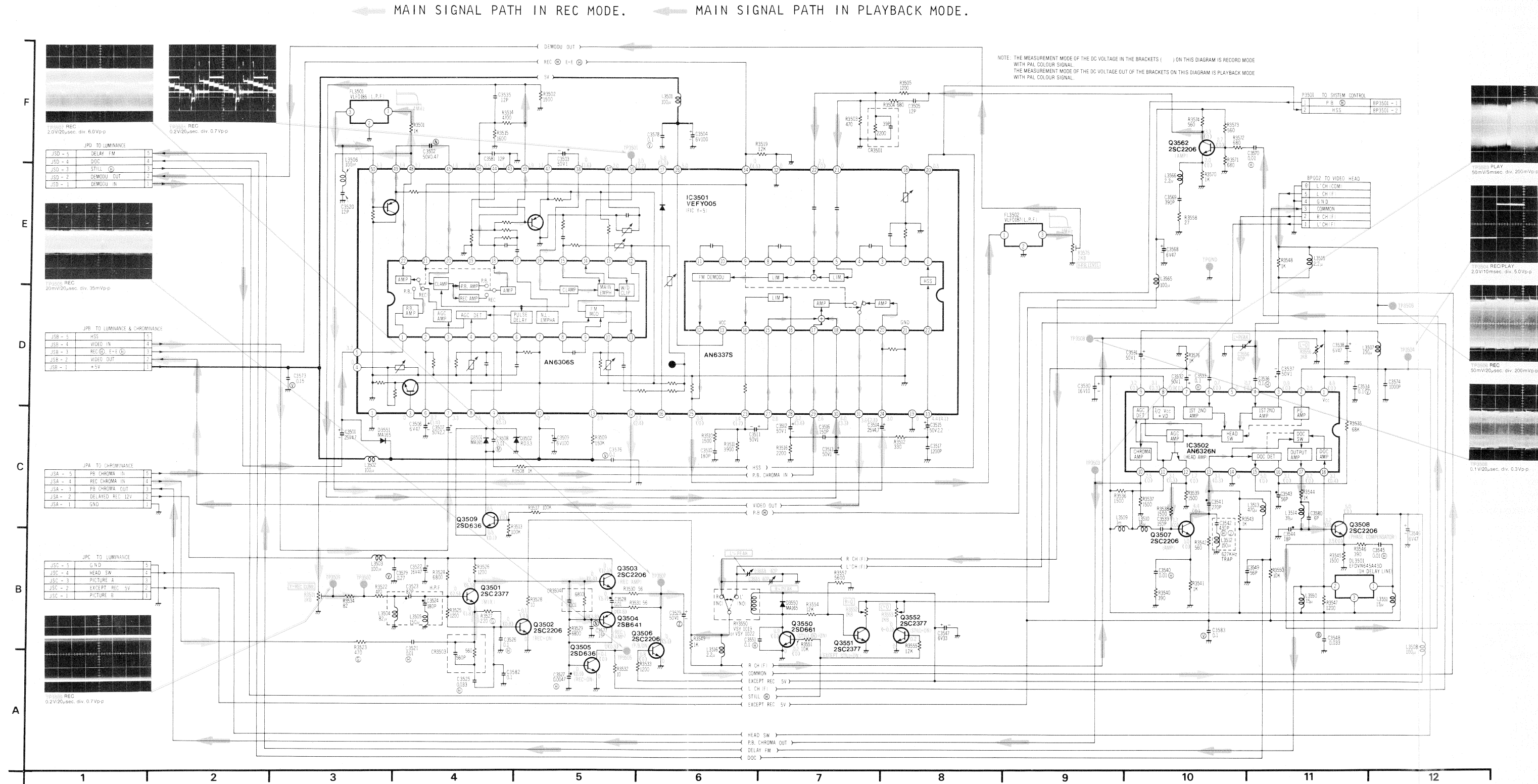
LUMINANCE & CHROMINANCE CIRCUIT BOARD	
Transistor	
Q3001	B-12
Q3002	B-12
Q3004	C-12
Q3005	C-12
Q3006	C-12
Q8001	C-11
Q8003	C-10
Q8004	C-10
Q8006	D-12
Q8007	D-12
Q8008	D-10
Q8009	D-10
Transistor & Resistor	
QR3001	C-12
QR3002	C-12
QR3003	C-12
QR3005	D-11
QR8002	C-10
QR8003	B-12
QR8004	D-10
Integrated Circuit	
IC3001	B-13
IC3050	B-9
IC8001	D-11
IC8002	B-10
Test Point	
TP3001	B-12
TP3051	C-10
TP8001	D-10
TP8002	D-11
TP8003	D-11
TP8004	D-12
TP8005	B-10
TP GND	C-13
Adjustment	
R3018	D-5
R3056	B-9
L8009	B-10

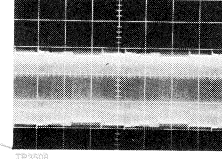
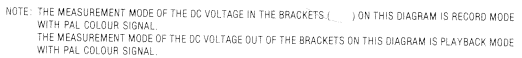
ADDRESS INFORMATION



NOTE: UNLESS OTHERWISE SPECIFIED, ALL DIODES ARE MA165

3-14. HEAD AMP & LUMINANCE (2) SCHEMATIC DIAGRAM

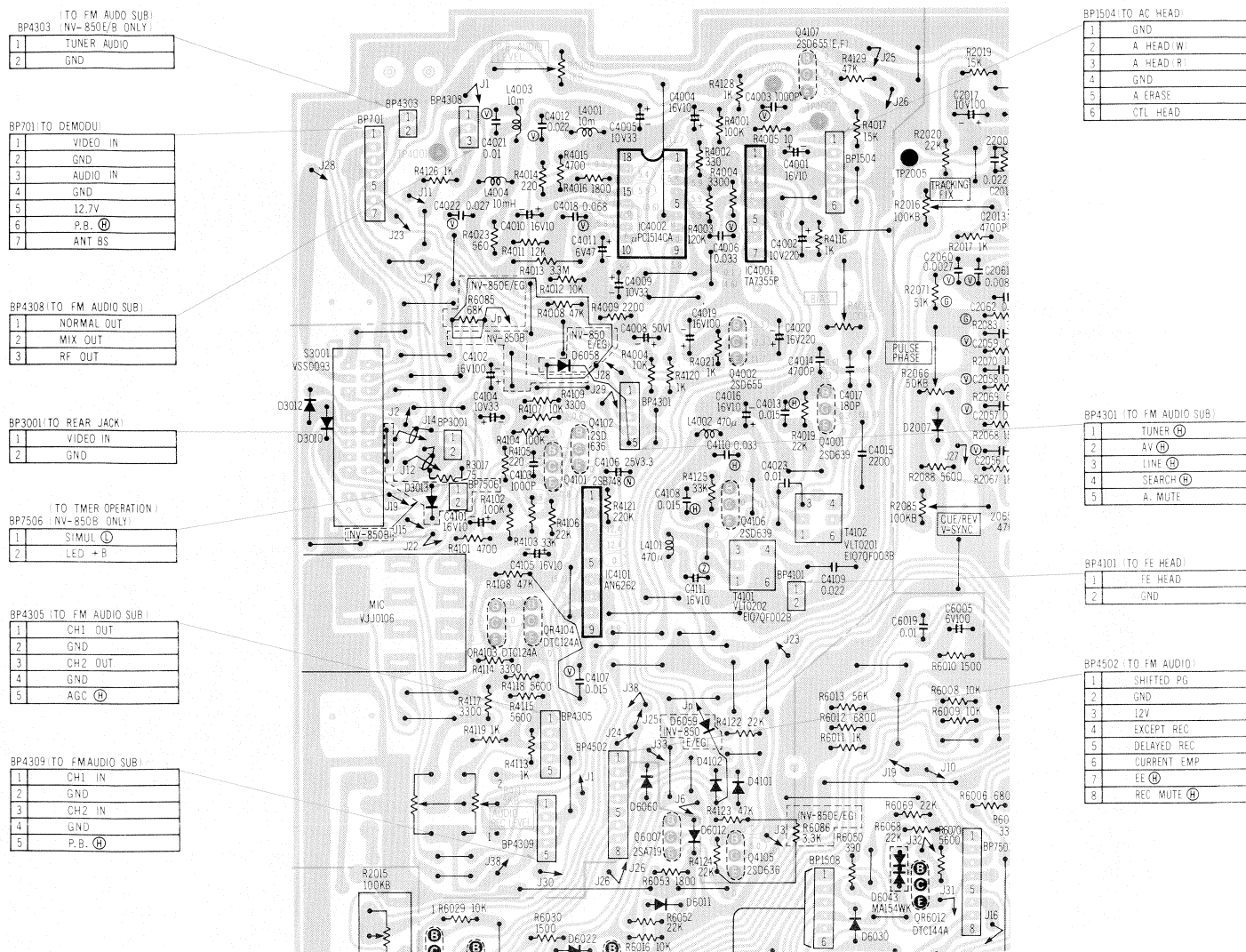


ADDRESS INFORMATION

AN6326N

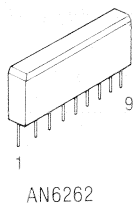
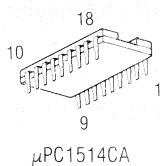
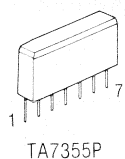
ADDRESS INFORMATION

3-16. AUDIO Section In Main Circuit Board (VEP03197A: NV-850EG/VEP03197B: NV-850B/VEP03197C)

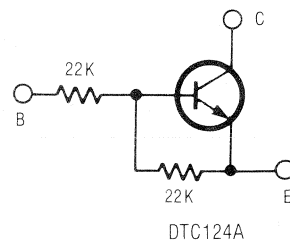


NOTE: UNLESS OTHERWISE SPECIFIED, ALL DIODES ARE MA165.

ICs & TRANSISTORS INFORMATION

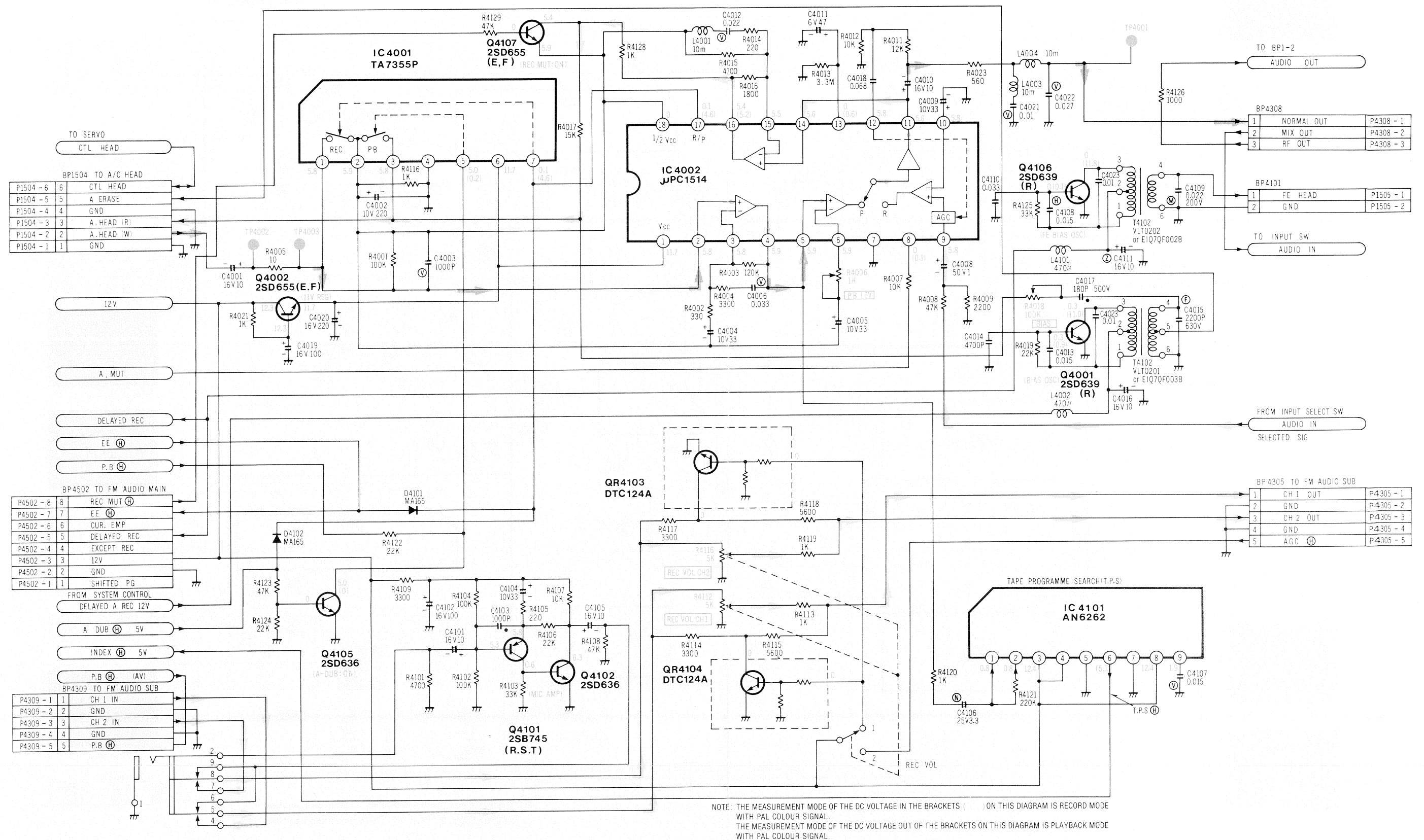


2SD639
2SD655
2SB745
2SD636
2SD1330

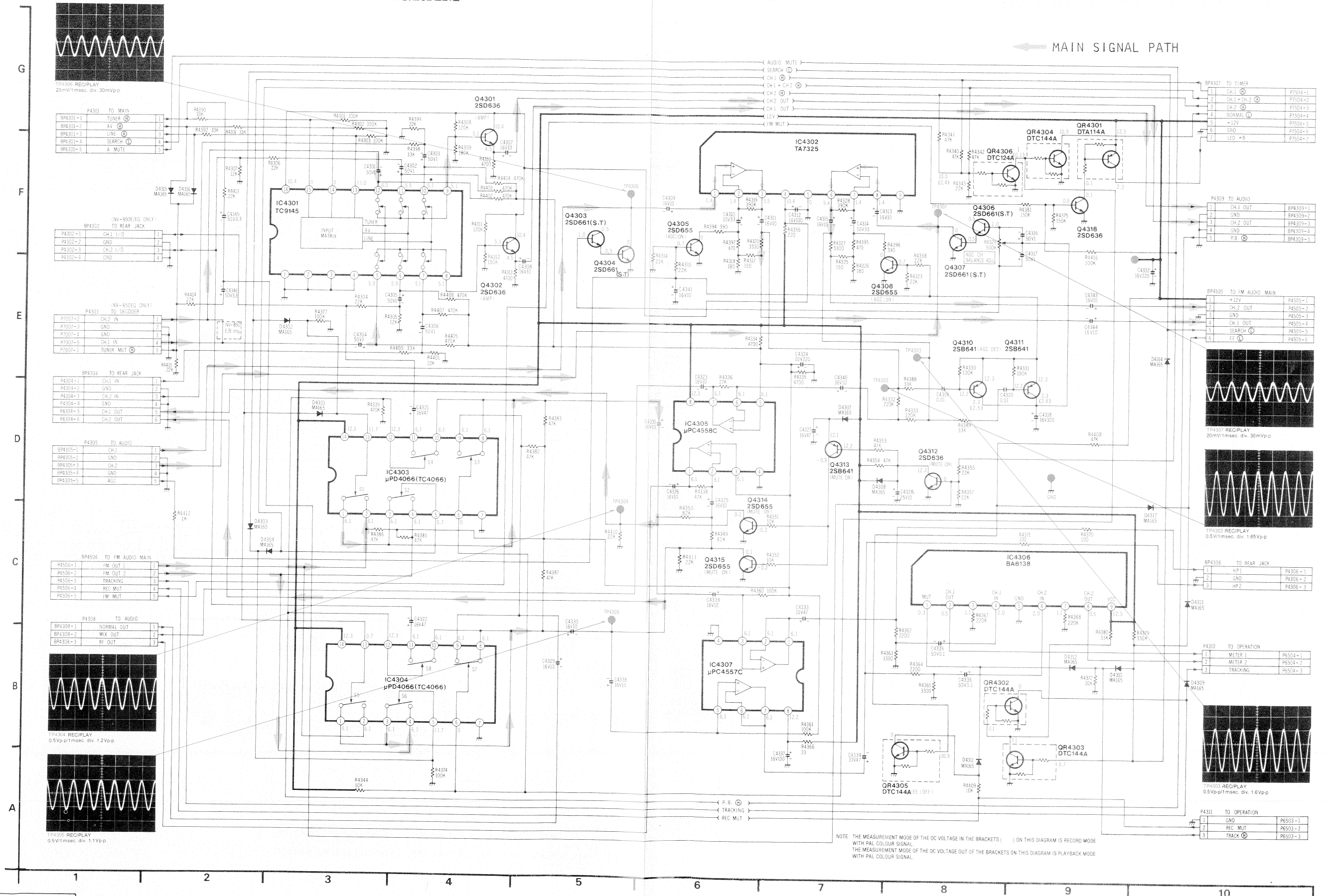


3-17. AUDIO SCHEMATIC DIAGRAM

← MAIN SIGNAL PATH IN REC MODE. ← MAIN SIGNAL PATH IN PLAYBACK MODE.



3-18. FM AUDIO SUB SCHEMATIC DIAGRAM

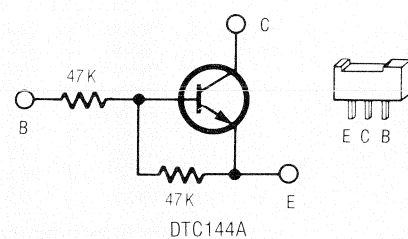
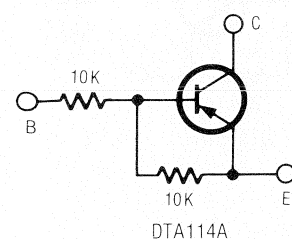
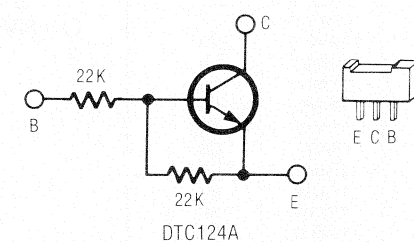
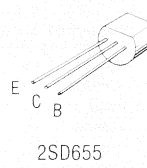
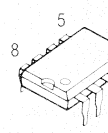
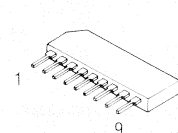
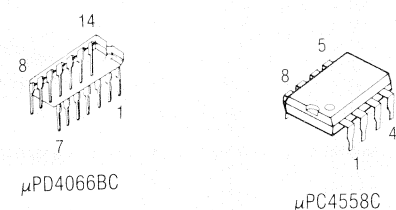
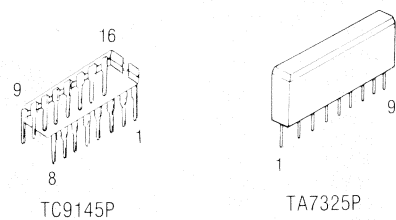


Back Page:
AUDIO Section

FM AUDIO SUB SCHEMATIC	
Transistor	
Q4301	G-4
Q4302	F-4
Q4303	F-5
Q4304	F-6
Q4306	F-8
Q4307	F-8
Q4308	F-8
Q4310	D-8
Q4311	D-9
Q4312	D-8
Q4313	D-7
Q4314	C-6
Q4315	C-6
Q4318	F-9
Transistor & Resistor	
QR4301	F-9
QR4302	B-9
QR4303	B-9
QR4304	F-9
QR4305	B-8
QR4306	F-9
Integrated Circuit	
IC4301	F-3
IC4302	F-7
IC4303	D-4
IC4304	B-4
IC4305	D-6
IC4306	C-8
IC4307	B-6
Test Point	
TP4301	F-10
TP4302	E-7
TP4303	E-8
TP4304	D-5
TP4305	C-5
TP4306	F-5
TP4307	F-8
TP GND	D-9
Adjustment	
R4329	F-8
Connector	
P4301	G-1
P4303	E-1
P4305	D-1
P4308	B-1
P4309	F-10
P4310	B-10
P4311	B-10
BP4302	F-1
BP4304	D-1
BP4306	C-10
BP4307	G-10
BP4505	E-10
BP4506	C-1

ADDRESS INFORMATION

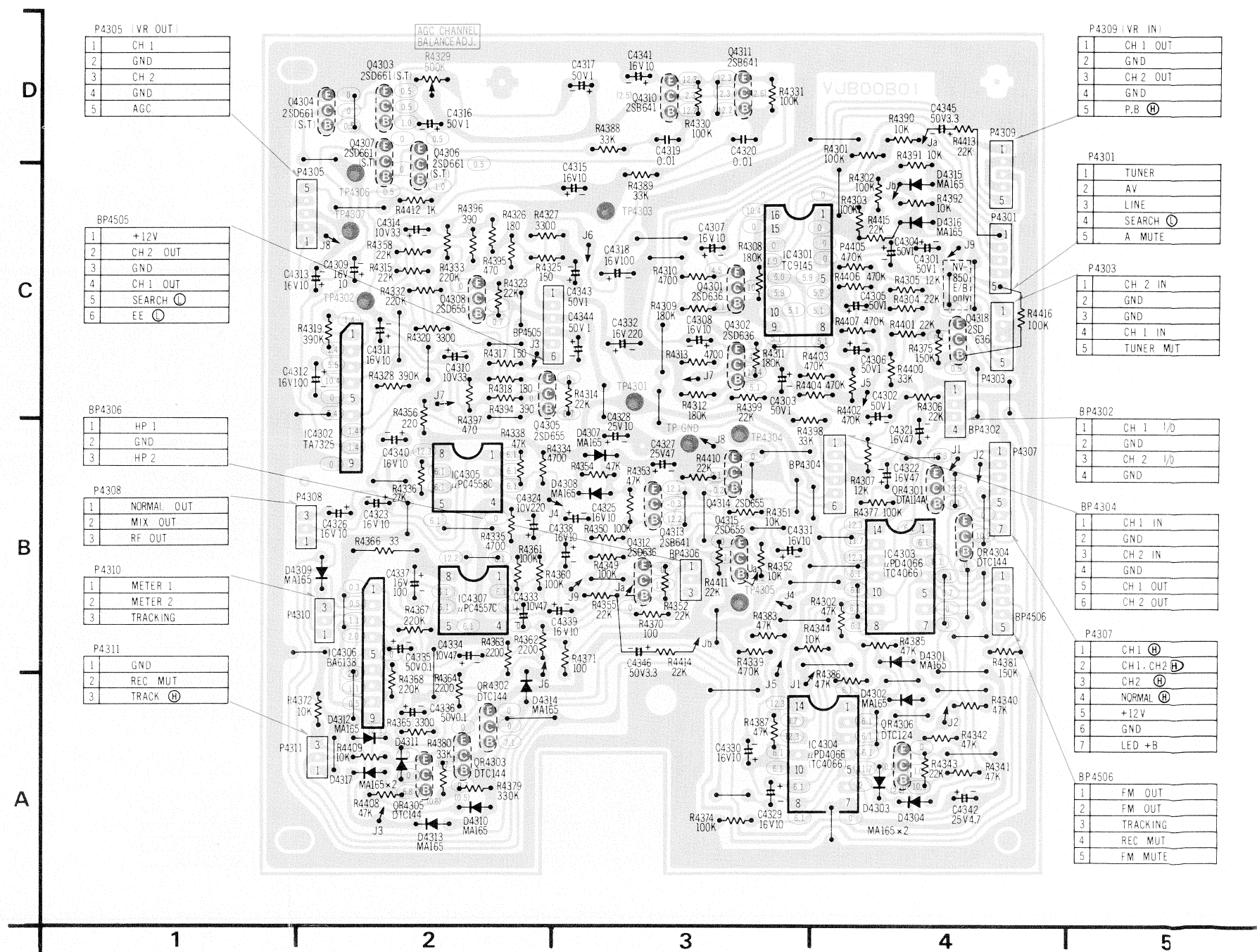
ICs & TRANSISTORS INFORMATION



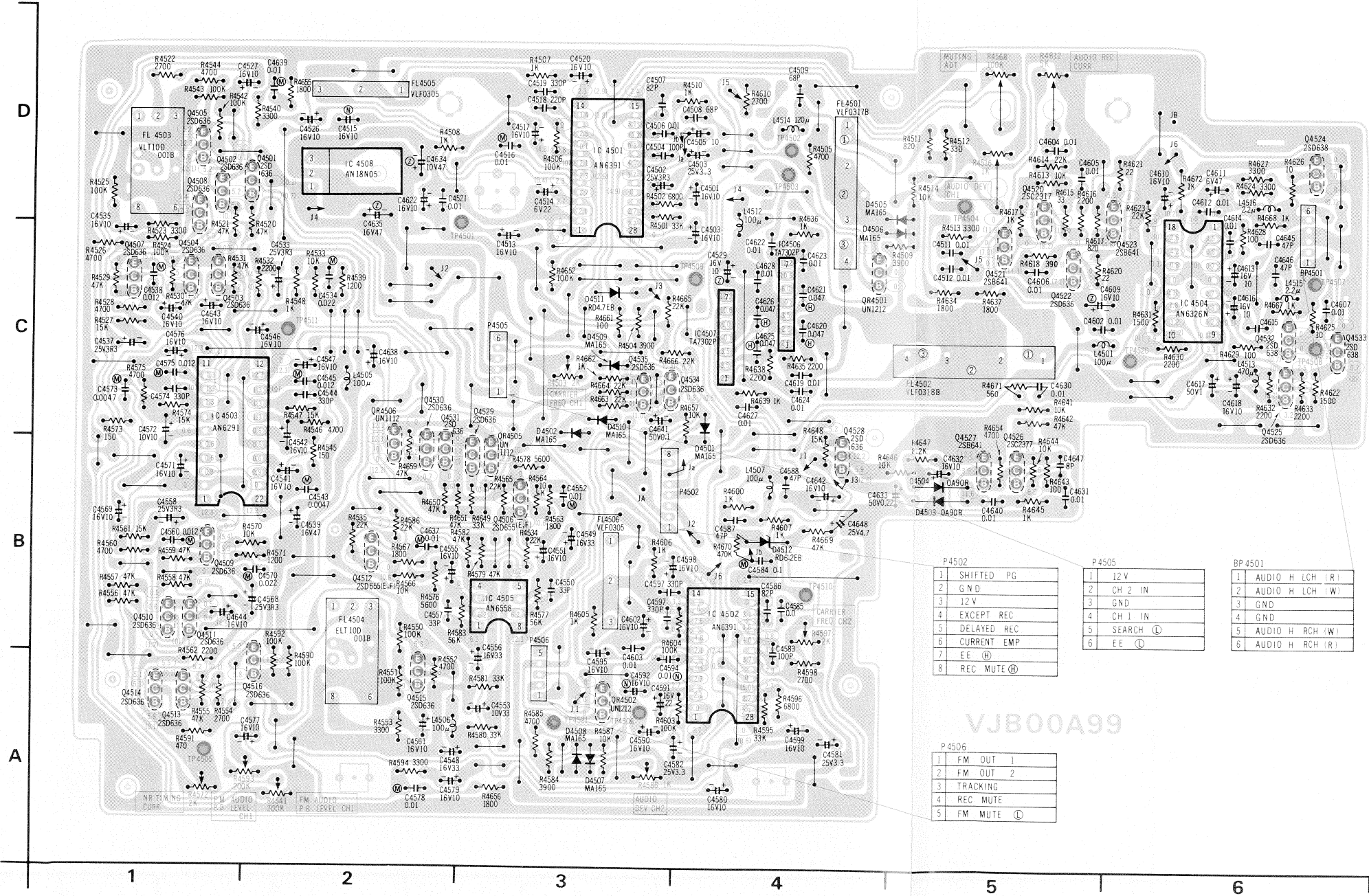
FM AUDIO SUB CIRCUIT BOARD	
Transistor	
Q4301	C-3
Q4302	C-3
Q4303	D-2
Q4304	D-2
Q4305	C-2
Q4306	C-2
Q4307	C-2
Q4308	C-2
Q4310	D-3
Q4311	D-3
Q4312	B-3
Q4313	B-3
Q4314	B-3
Q4315	B-3
Q4318	C-4
Transistor & Resistor	
QR4301	B-4
QR4302	A-2
QR4303	A-2
QR4304	B-4
QR4305	A-2
QR4306	A-4
Integrated Circuit	
IC4301	C-3
IC4302	C-2
IC4303	B-4
IC4304	A-4
IC4305	B-2
IC4306	B-2
IC4307	B-2
Test Point	
TP4301	B-3
TP4302	C-2
TP4303	C-3
TP4304	B-3
TP4305	B-3
TP4306	C-2
TP GND	B-3
Adjustment	
R4329	C-2

ADDRESS INFORMATION

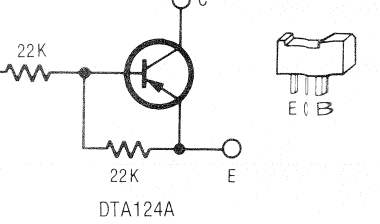
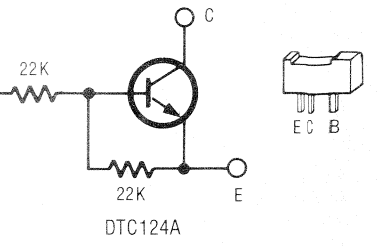
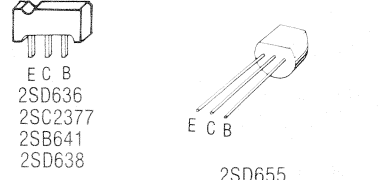
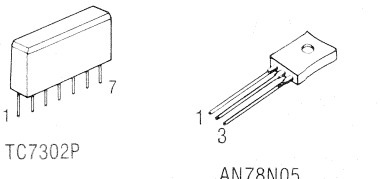
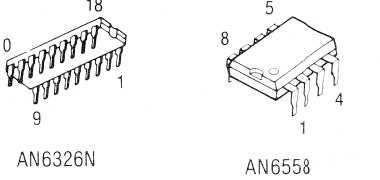
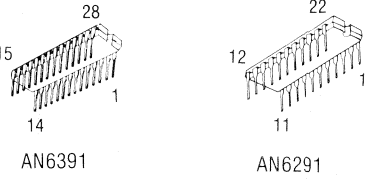
3-19. FM AUDIO SUB CIRCUIT BOARD (VEP00B01A: NV-850EG/VEP00B01B:



3-20. FM AUDIO MAIN CIRCUIT BOARD (VEP00A99A)



ICs & TRANSISTORS INFORMATION



FM AUDIO MAIN CIRCUIT BOARD

Transistor

Q4501	D-1
Q4502	D-1
Q4503	C-1
Q4504	C-1
Q4505	D-1
Q4506	B-3
Q4507	C-1
Q4508	D-1
Q4509	B-1
Q4510	B-1
Q4511	B-1
Q4512	B-2
Q4513	A-1
Q4514	A-1
Q4515	A-2
Q4516	A-2
Q4520	C-5
Q4521	C-5
Q4522	C-5
Q4523	C-5
Q4524	D-6
Q4525	C-6
Q4526	B-5
Q4527	B-5
Q4528	C-4
Q4529	B-3
Q4530	B-2
Q4531	B-2
Q4532	C-6
Q4533	C-6
Q4534	C-3
Q4535	C-3

Transistor & Resistor

QR4501	C-4
QR4502	A-3
QR4505	B-3
QR4506	B-2

Integrated Circuit

IC4501	D-3
IC4502	A-4
IC4503	C-1
IC4504	C-6
IC4505	B-3
IC4506	C-4
IC4507	C-4
IC4508	D-2

Test Point

TP4501	C-2
TP4502	D-4
TP4503	D-4
TP4504	D-5
TP4505	A-1
TP4506	A-3
TP4507	C-6
TP4508	C-6
TP4509	C-4
TP4510	B-4
TP4511	C-2
TP4512	C-6
TP4521	A-3

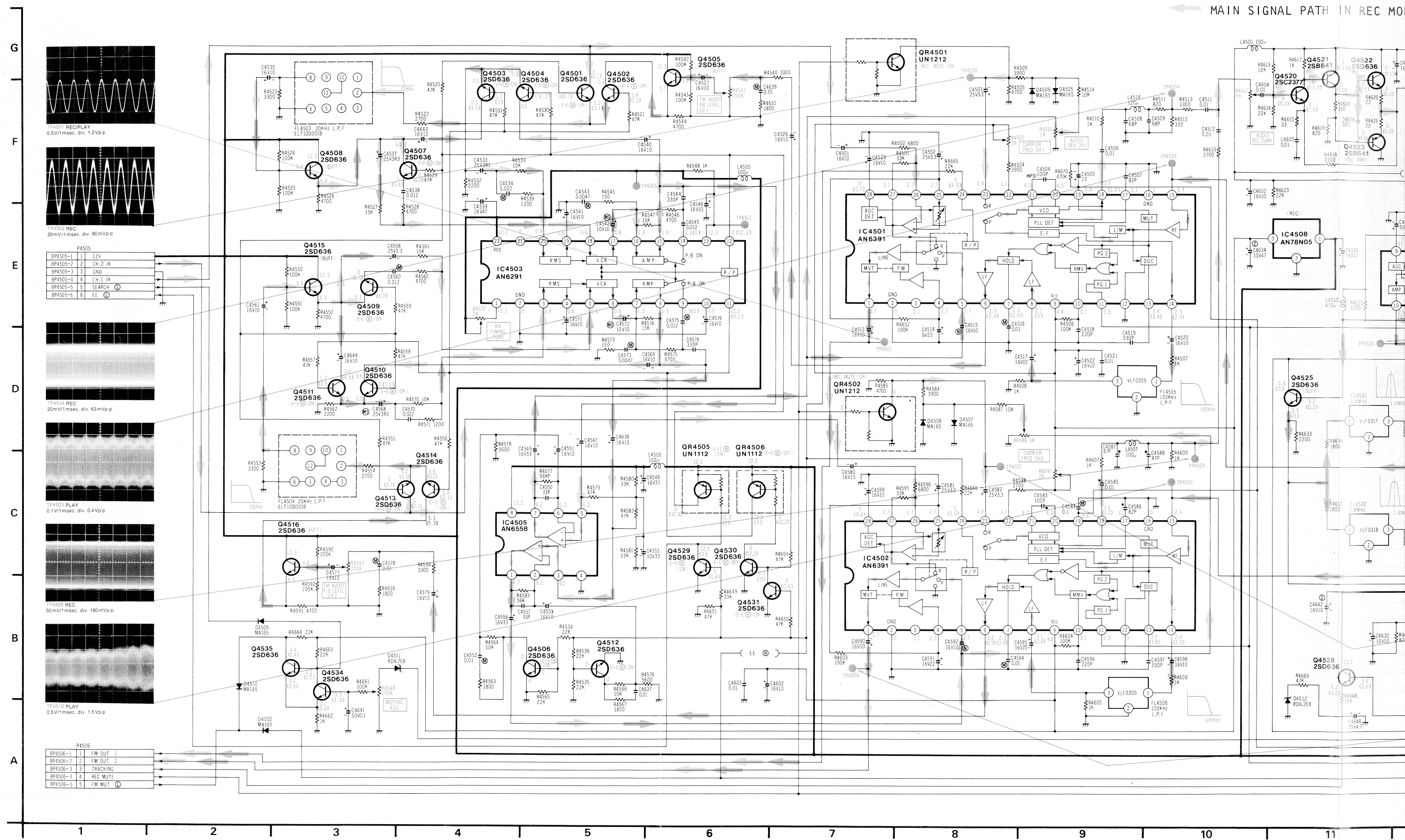
Adjustment

R4503	C-3
R4516	D-5
R4541	A-2
R4568	D-5
R4572	A-1
R4586	A-3
R4593	A-2
R4597	B-4
R4612	D-5

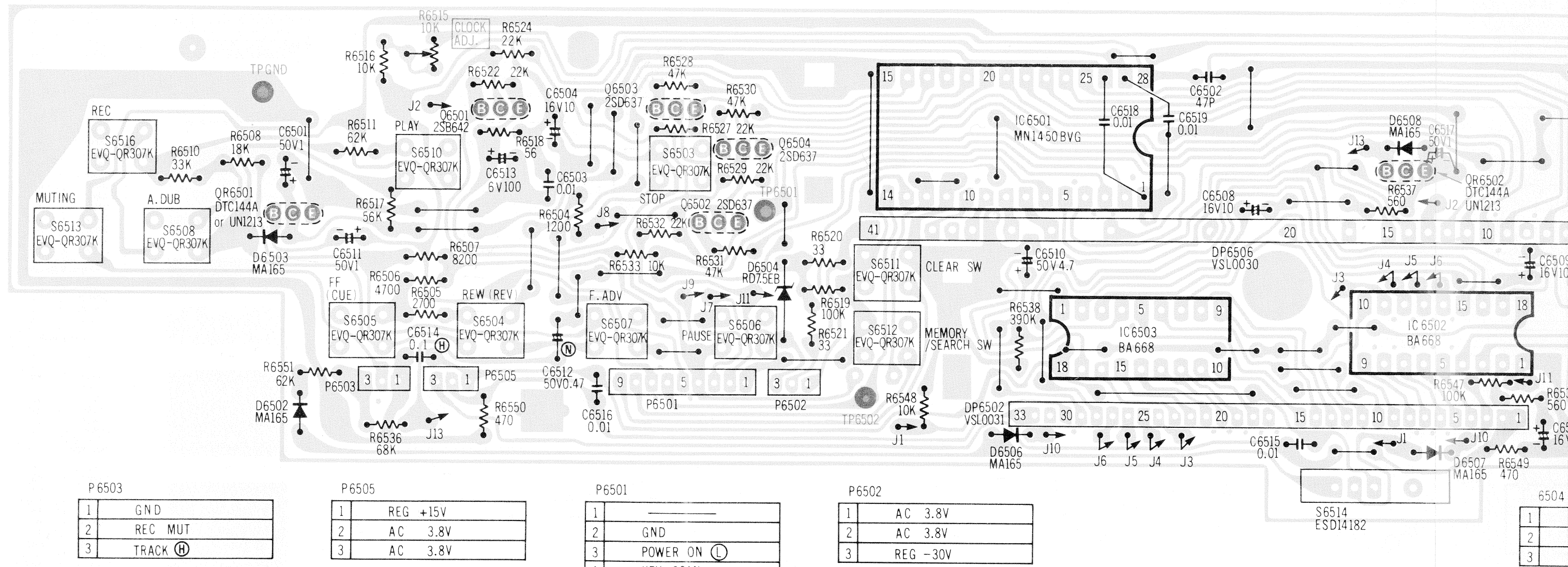
ADDRESS INFORMATION

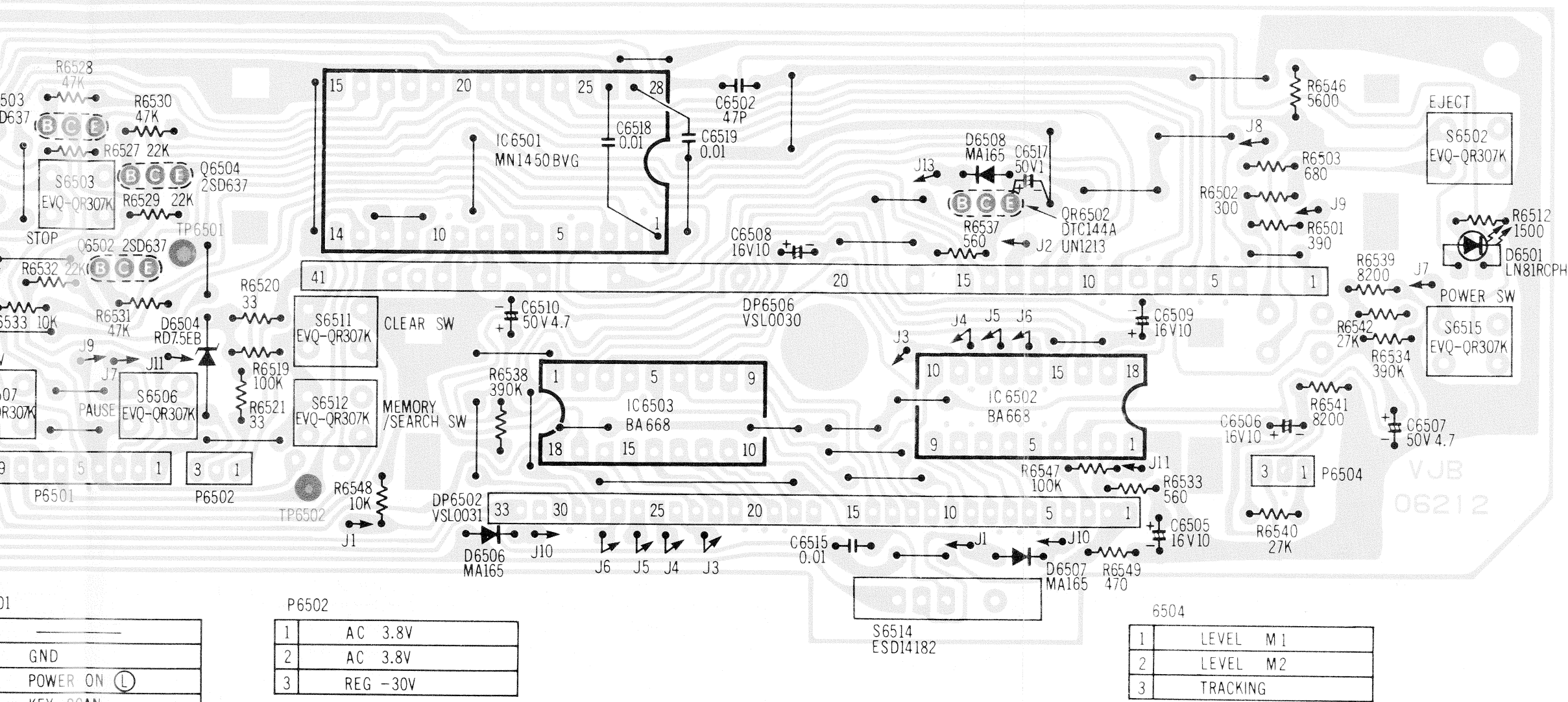
Back Page:
FM AUDIO SUB Section

3-21. FM AUDIO MAIN SCHEMATIC DIAGRAM



3-22. OPERATION CIRCUIT BOARD (VEP06212A)

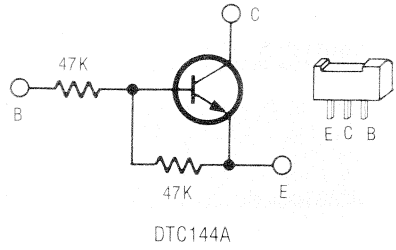
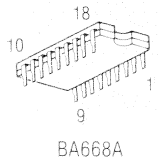
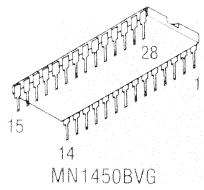




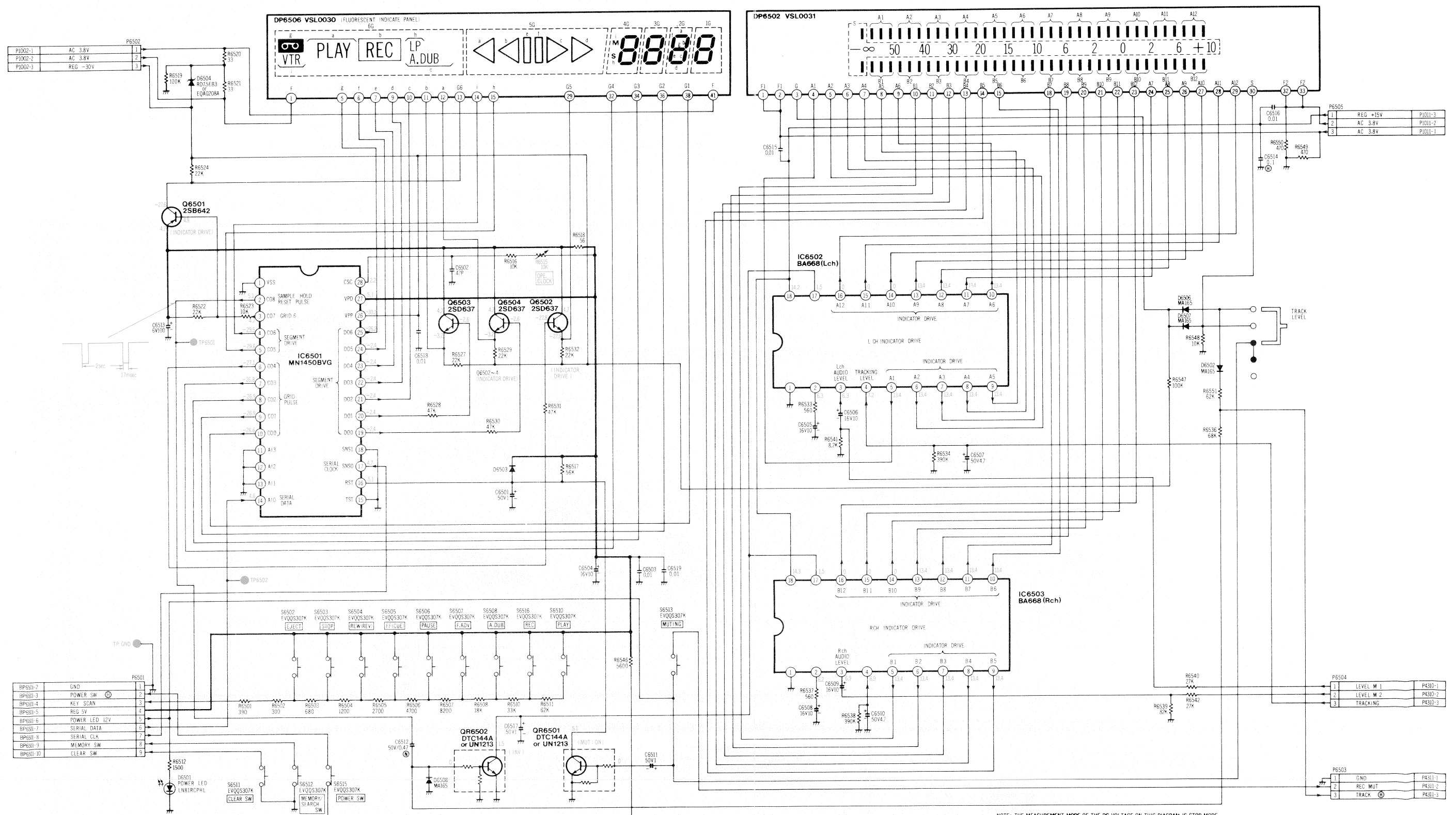
01
GND
POWER ON (L)
KEY SCAN
5V REC
POWER LED 12V
SERIAL DATA
SERIAL CLOCK
MEMORY SW
CLEAR SW

P6502	
1	AC 3.8V
2	AC 3.8V
3	REG -30V

6504	
1	LEVEL M1
2	LEVEL M2
3	TRACKING



3-23. OPERATION SCHEMATIC DIAGRAM

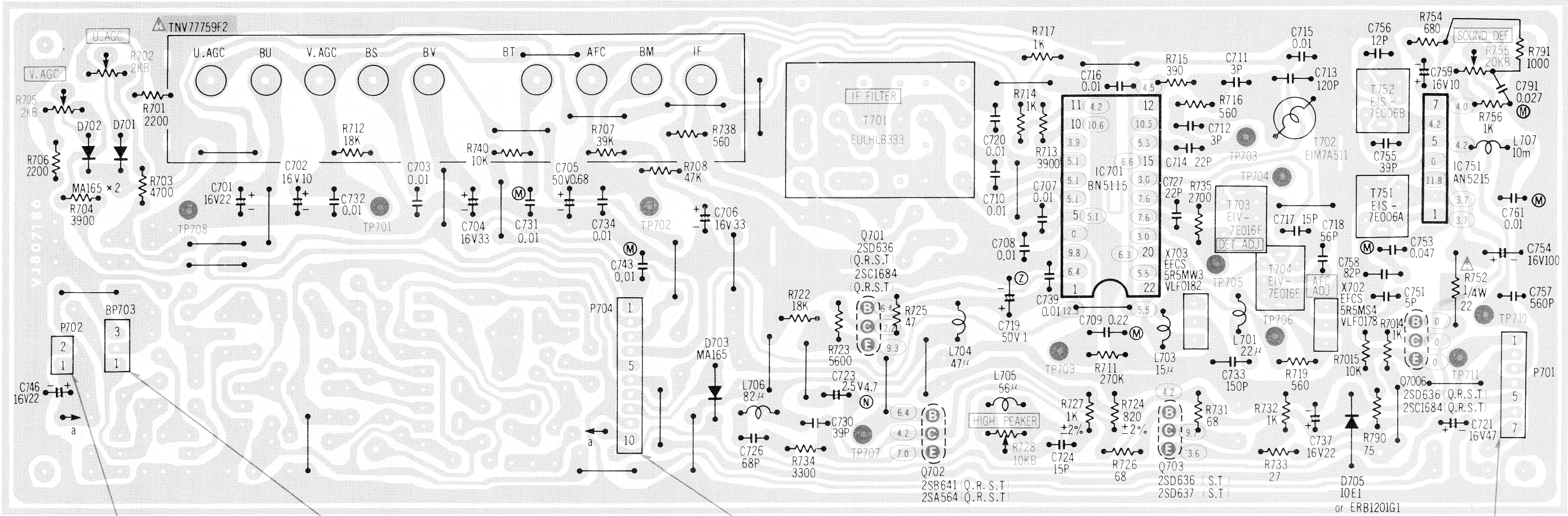


VIDEO LOOP ← AUDIO LOOP



3—32

3-25. TV DEMODULATOR CIRCUIT BOARD (VEP07186G: NV-850E)



P702

1	12.0V (F)
2	GND

BP703

1	
2	+12V (F)
3	GND

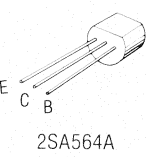
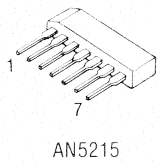
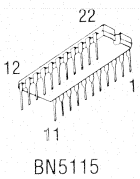
P704

1	BT
2	BV
3	BS
4	GND
5	BU
6	+12.0V (B)
7	AFC . DEF
8	AUDIO DEF
9	GND
10	12.7V

P701

1	VIDEO
2	GND
3	AUDIO
4	GND
5	+12.0V (B)
6	
7	

ICs & TRANSISTORS INFORMATION



VIDEO LOOP ← AUDIO LOOP



[illegible]

BN5115

AN5215

2SD636
2SB641

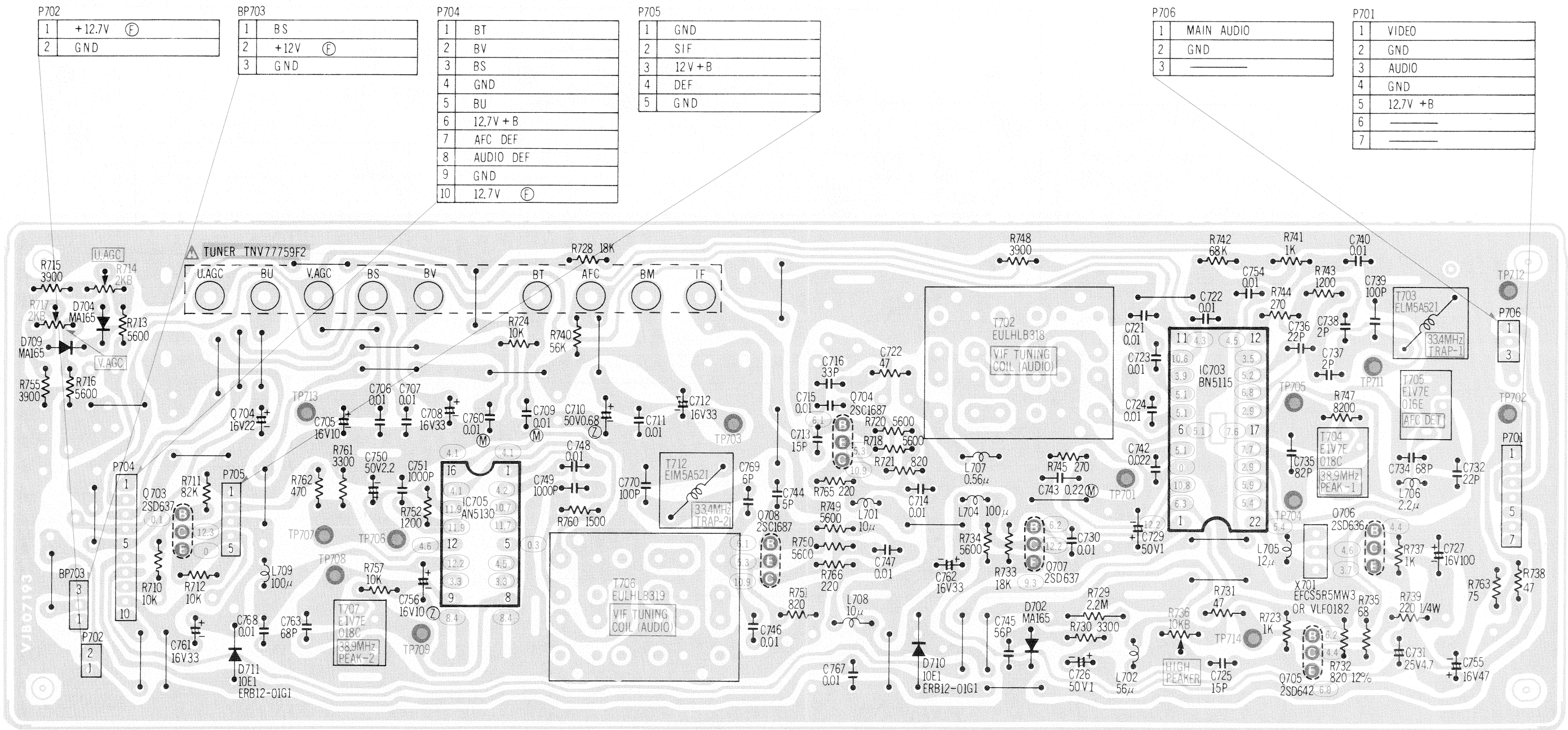
2SA564A

3—36

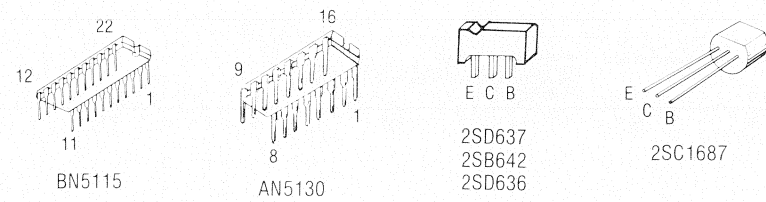
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN  HAVE SPECIAL CHARACTERISTICS
IMPORTANT FOR SAFETY WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY
THE SPECIFIED PARTS.

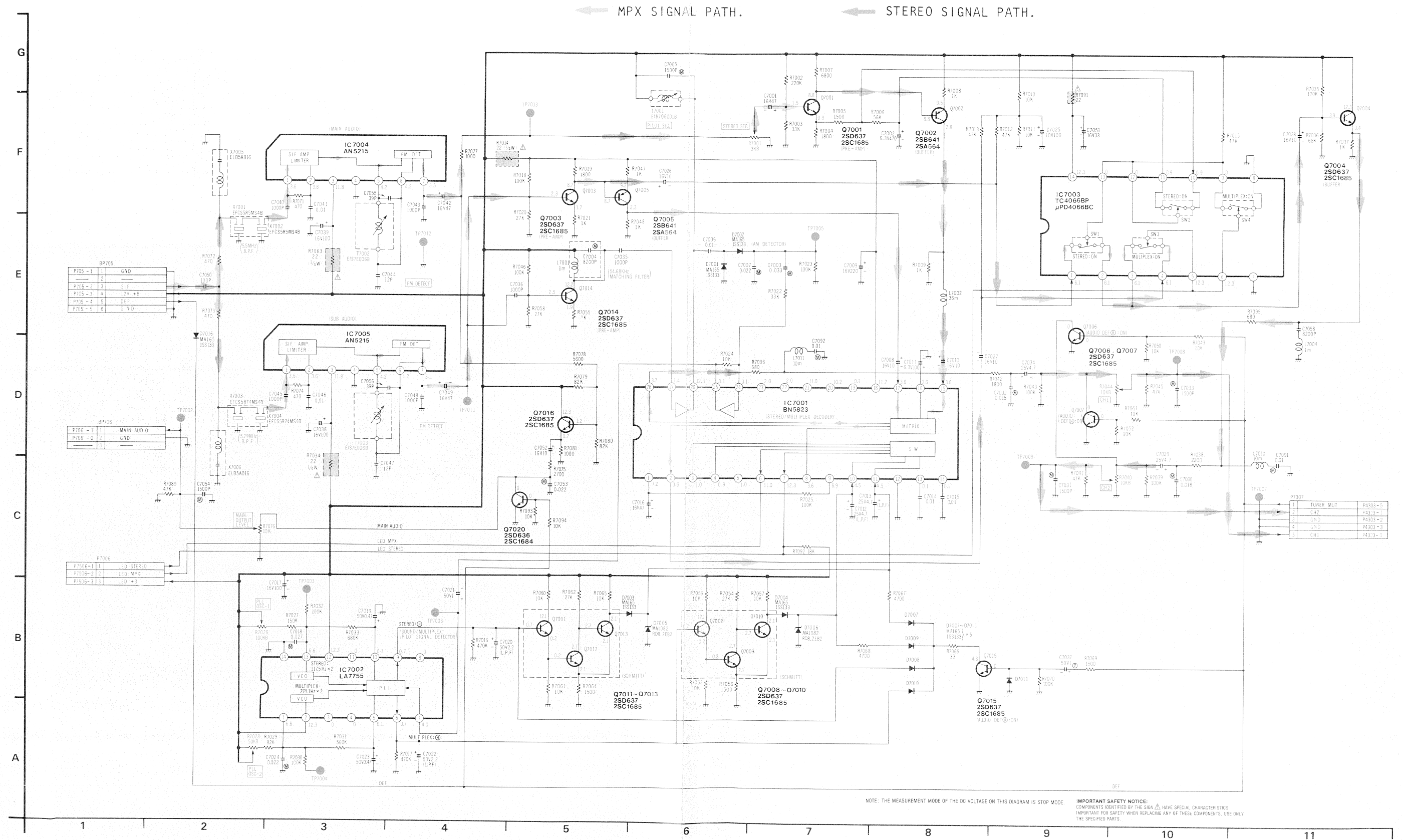
3-29. TV DEMODULATOR CIRCUIT BOARD (VEP07193A: NV-850EG)



ICs & TRANSISTORS INFORMATION



3-30. DECODER SCHEMATIC DIAGRAM (NV-850EG)



3-31. DECODER CIRCUIT BOARD (VEP07194A: NV-850EG)

DECODER SCHEMATIC	
Transistor	
Q7001	F-7
Q7002	F-8
Q7003	F-5
Q7004	F-11
Q7005	F-6
Q7006	D-9
Q7007	D-9
Q7008	B-6
Q7009	B-6
Q7010	B-7
Q7011	B-5
Q7012	B-5
Q7013	B-5
Q7014	E-5
Q7015	B-8
Q7016	D-5
Q7020	C-5

Integrated Circuit	
IC7001	D-7
IC7002	B-3
IC7003	F-10
IC7004	F-3
IC7005	D-3

Test Point	
TP7002	D-2
TP7003	B-3
TP7004	A-3
TP7005	E-7
TP7006	B-4
TP7007	C-11
TP7008	D-10
TP7009	D-9
TP7011	D-4
TP7012	E-4
TP7013	F-5

Adjustment	
R7001	F-7
R7026	B-2
R7028	A-2
R7040	C-9
R7044	D-9
R7076	C-2
T7001	G-6
T7002	F-3
T7003	D-3

Connector	
BP705	E-1
BP706	D-1
P7006	C-1
P7007	C-11

DECODER CIRCUIT BOARD	
Transistor	
Q7001	B-4
Q7002	A-4
Q7003	B-3
Q7004	B-4
Q7005	B-2
Q7006	A-4
Q7007	A-4
Q7008	A-6
Q7009	A-6
Q7010	B-6
Q7011	B-6
Q7012	B-6
Q7013	B-6
Q7014	B-2
Q7015	A-6
Q7016	B-3
Q7020	A-3

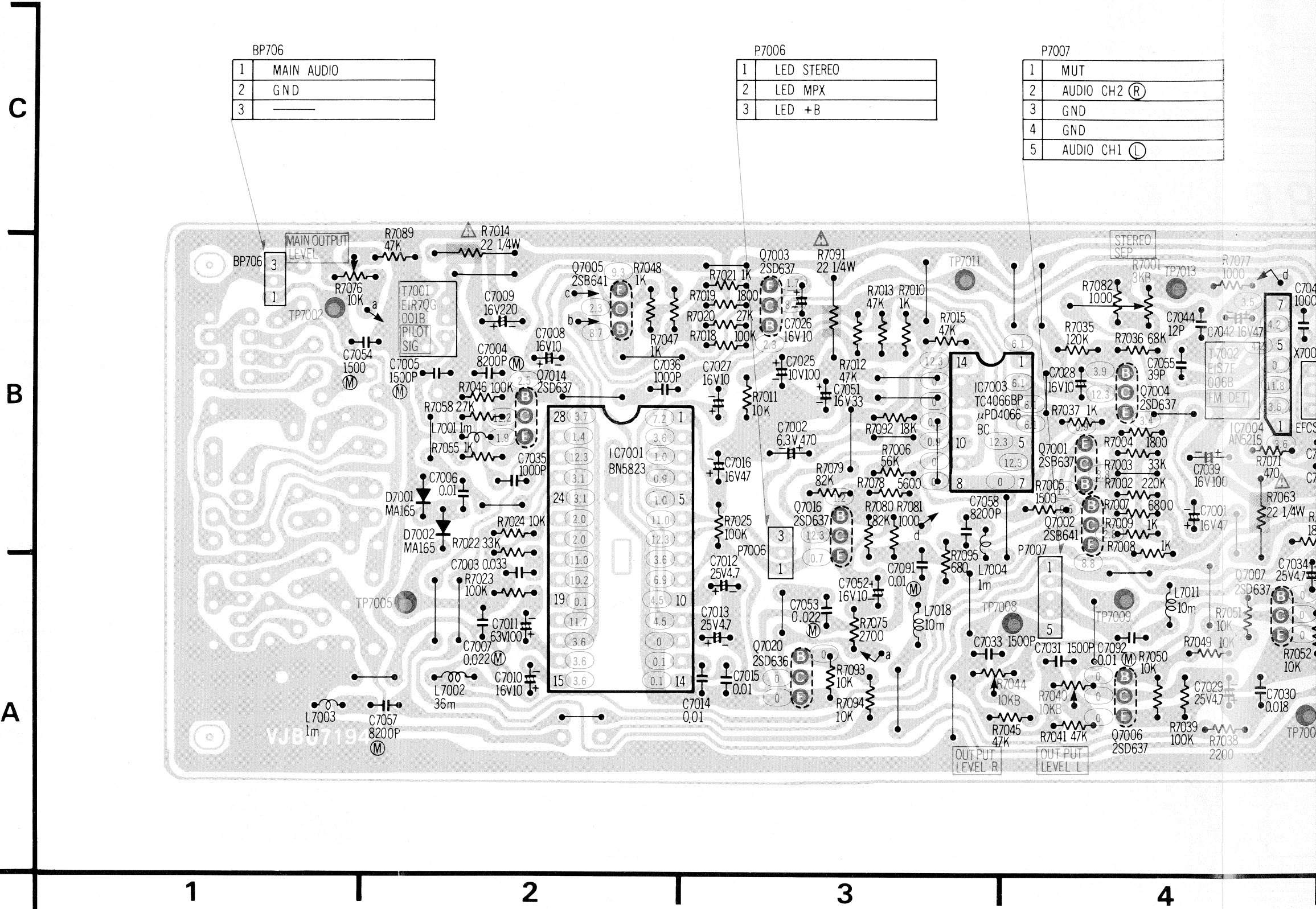
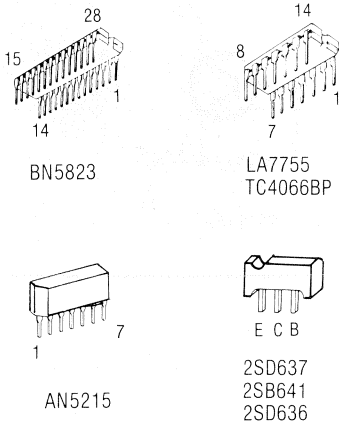
Integrated Circuit	
IC7001	B-2
IC7002	A-5
IC7003	B-3
IC7004	B-4
IC7005	B-5

Test Point	
TP7002	B-2
TP7003	A-5
TP7004	A-5
TP7005	A-2
TP7006	A-5
TP7007	A-4
TP7008	A-4
TP7009	A-4
TP7011	B-3
TP7012	B-5
TP7013	B-4

Adjustment	
R7001	B-4
R7026	A-5
R7028	A-5
R7040	A-4
R7044	A-4
R7076	B-2
T7001	B-2
T7002	B-4
T7003	B-5

| ADDRESS INFORMATION | |

ICs & TRANSISTORS INFORMATION

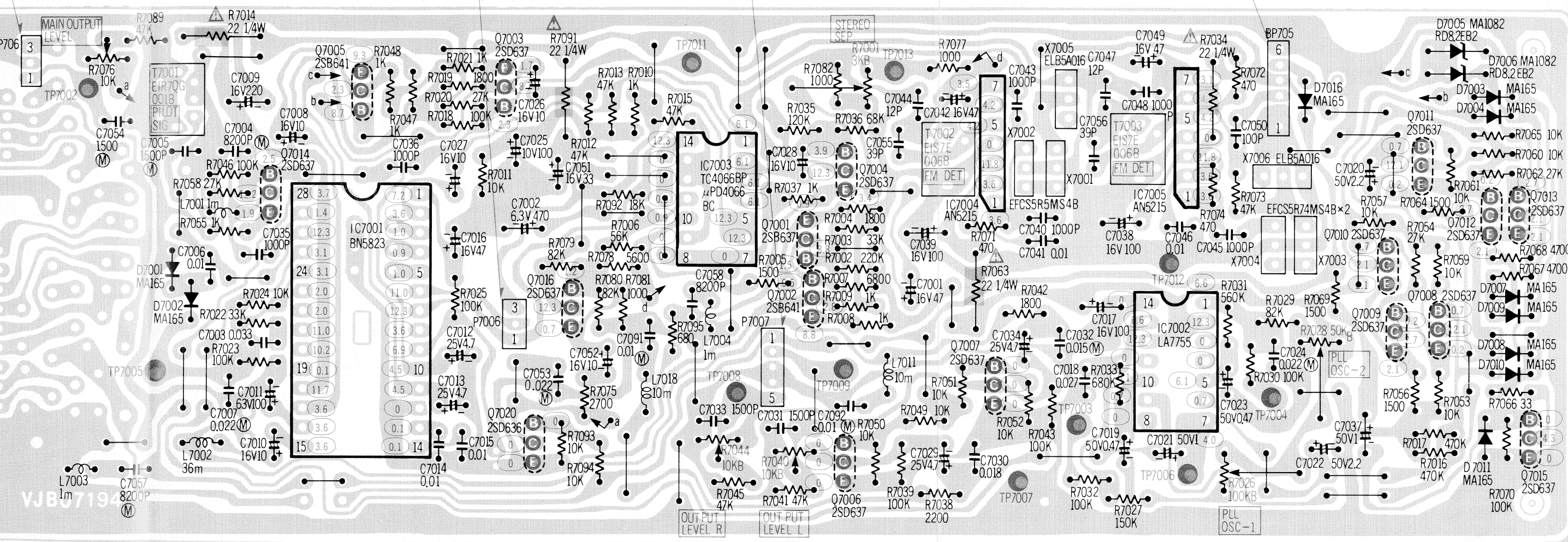


BP706	
1	MAIN AUDIO
2	GND
3	

P7006	
1	LED STEREO
2	LED MPX
3	LED +B

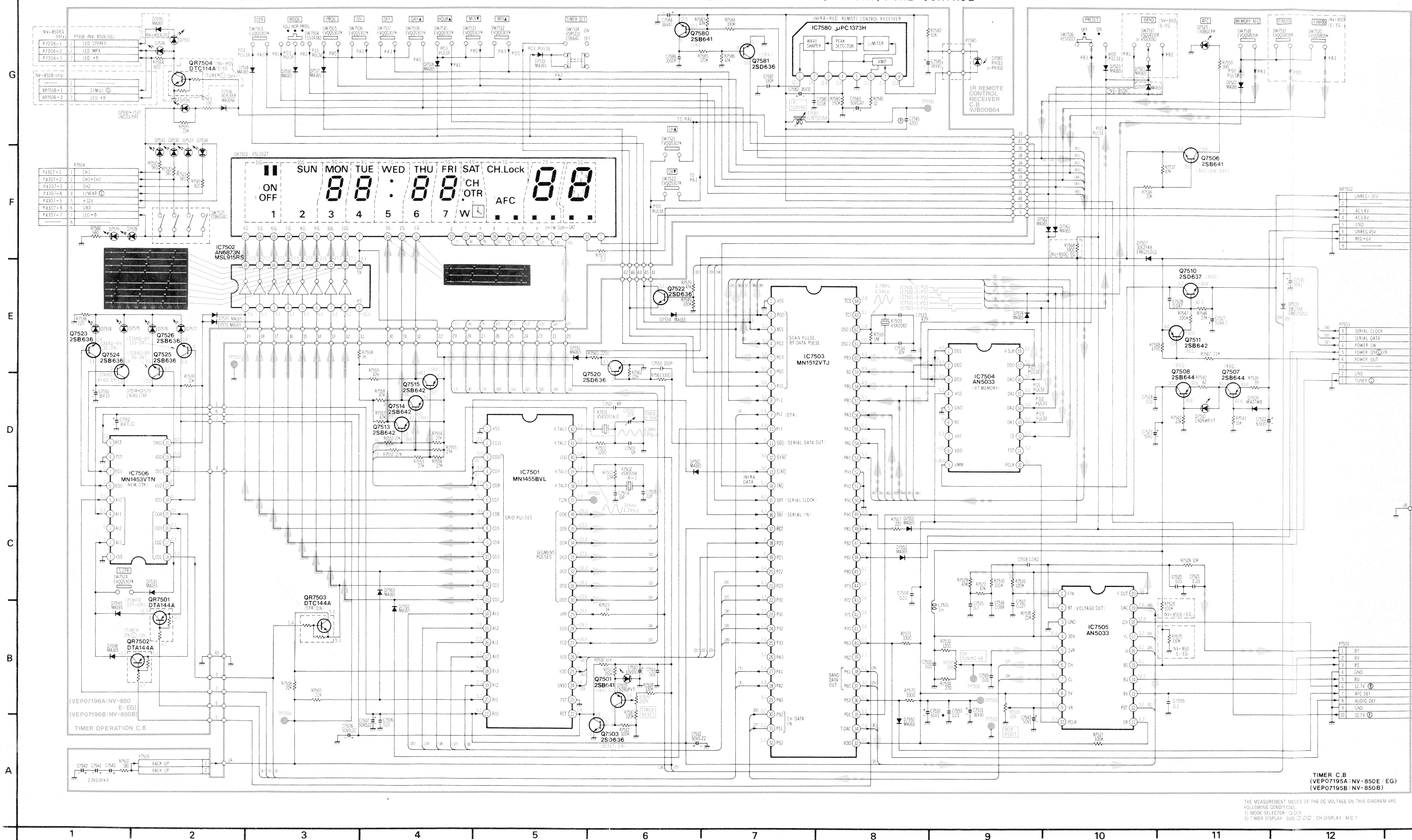
P7007	
1	MUT
2	AUDIO CH2 (R)
3	GND
4	GND
5	AUDIO CH1 (L)

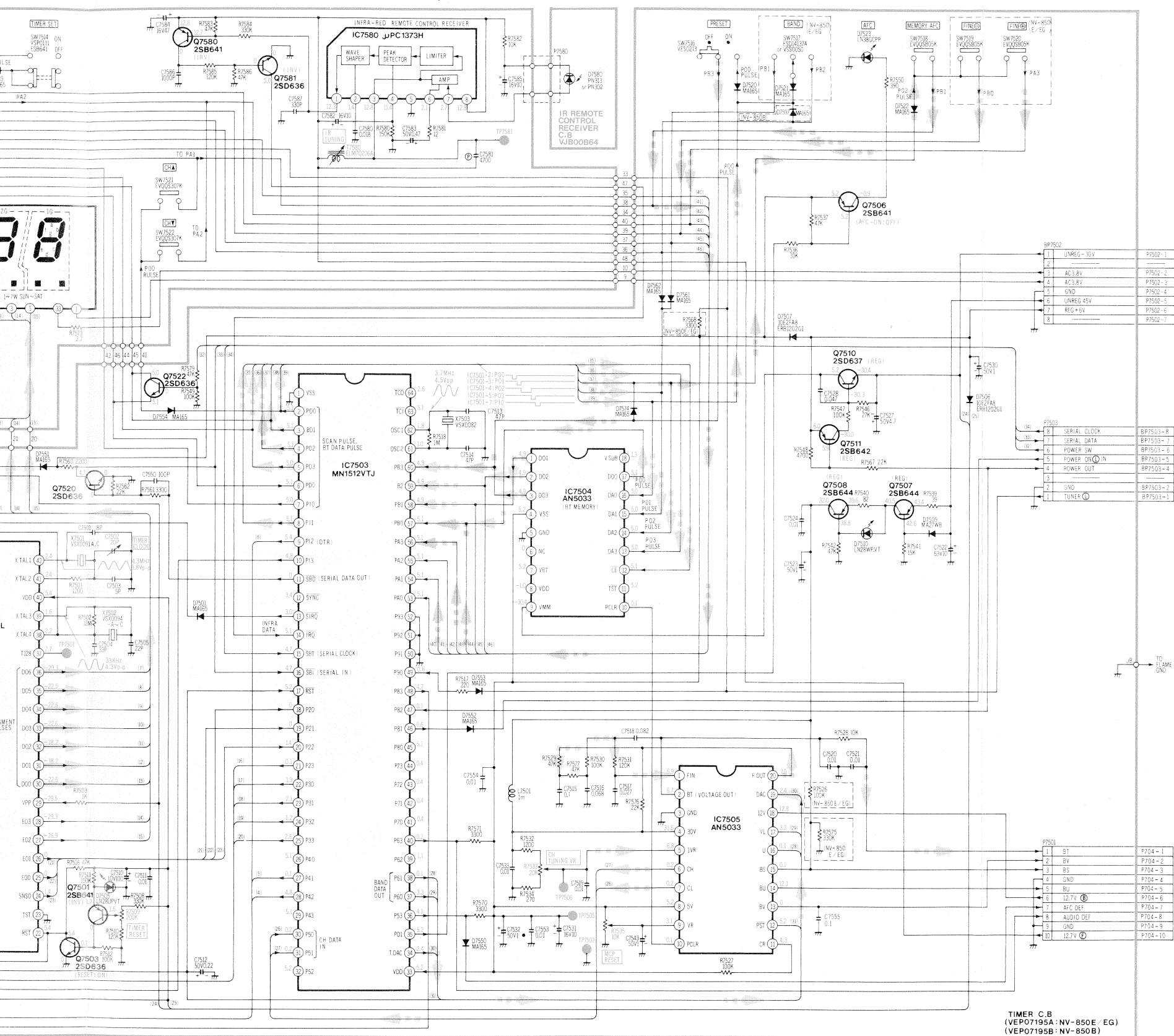
BP705	
1	GND
2	
3	SIF
4	12V+B
5	DEF
6	GND



3-32. TIMER & TIMER OPERATION SCHEMATIC DIAGRAM

SEGMENT CONTROL SIGNAL. ← GRID CONTROL SIGNAL. ← BT/CH DATA TRANSMISSION LOOP ← PRESET/MEMORY/FINE CONTROL



TIMER & TIMER
OPERATION SCHEMATIC

Transistor

Q7501	B-6
Q7503	B-6
Q7506	F-11
Q7507	D-11
Q7508	D-11
Q7510	E-11
Q7511	E-11
Q7513	D-4
Q7514	D-4
Q7515	D-4
Q7520	E-6
Q7522	E-6
Q7523	E-1
Q7524	D-1
Q7525	D-2
Q7526	E-2
Q7580	G-6
Q7581	G-7

Transistor & Resistor

QR7501	B-2
QR7502	B-2
QR7503	B-3
QR7504	G-2 (E/EG)

Integrated Circuit

IC7501	C-5
IC7502	E-3
IC7503	D-7
IC7504	D-9
IC7505	B-10
IC7506	C-2
IC7580	G-8

Test Point

TP7501	C-6
TP7503	A-9
TP7504	A-3
TP7505	A-9
TP7506	B-9
TP7507	D-2
TP7581	G-9

Adjustment

R7509	B-6
R7533	B-9
R7535	B-9
C7502	D-6
T7580	G-7

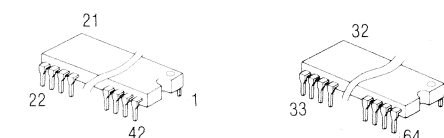
Connector

P7501	B-12
P7503	E-12
P7504	F-1
P7505	A-2
P7506	G-1
BP7502	F-12

ADDRESS INFORMATION

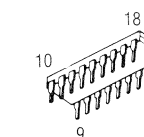
1	BT	P704-1
2	BV	P704-2
3	BS	P704-3
4	GND	P704-4
5	BU	P704-5
6	12.7V	P704-6
7	AFC DEF	P704-7
8	AUDIO DEF	P704-8
9	GND	P704-9
10	12.7V	P704-10

ICs & TRANSISTORS INFORMATION

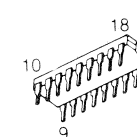
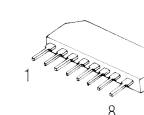


MN1455BVL

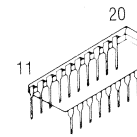
MN1512VTJ



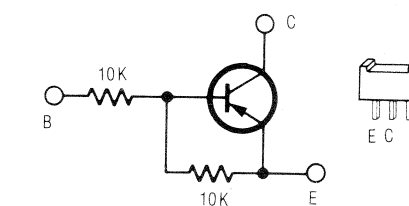
MN1228

AN6873N
MN1453VTN

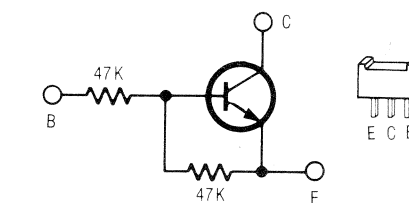
μPC1373H



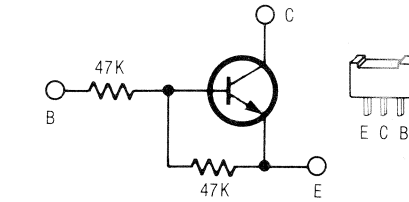
AN5033



DTC114A

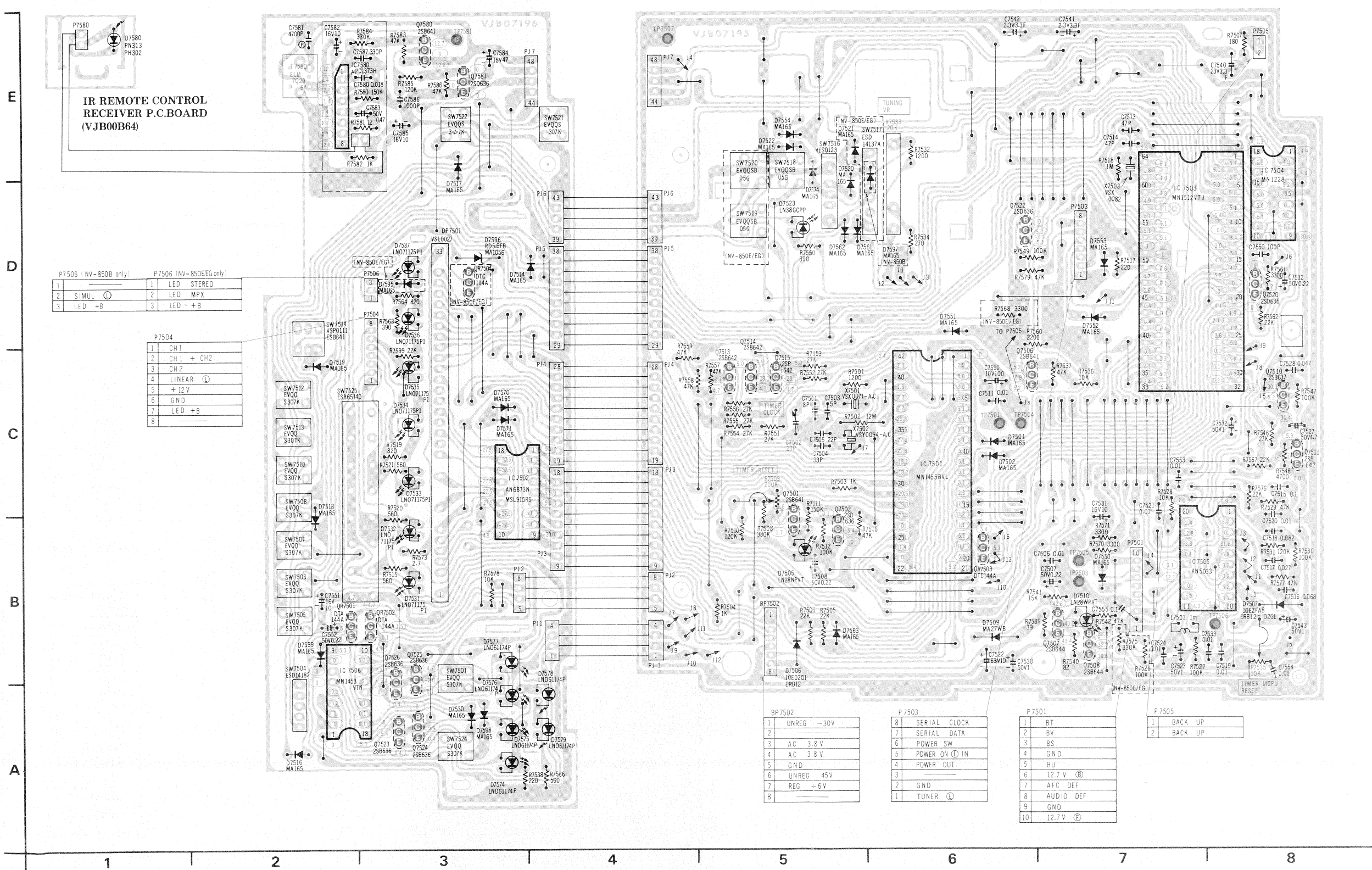


DTA144A

2SB641
2SD636
2SB644
2SD637
2SB642

DTC144A

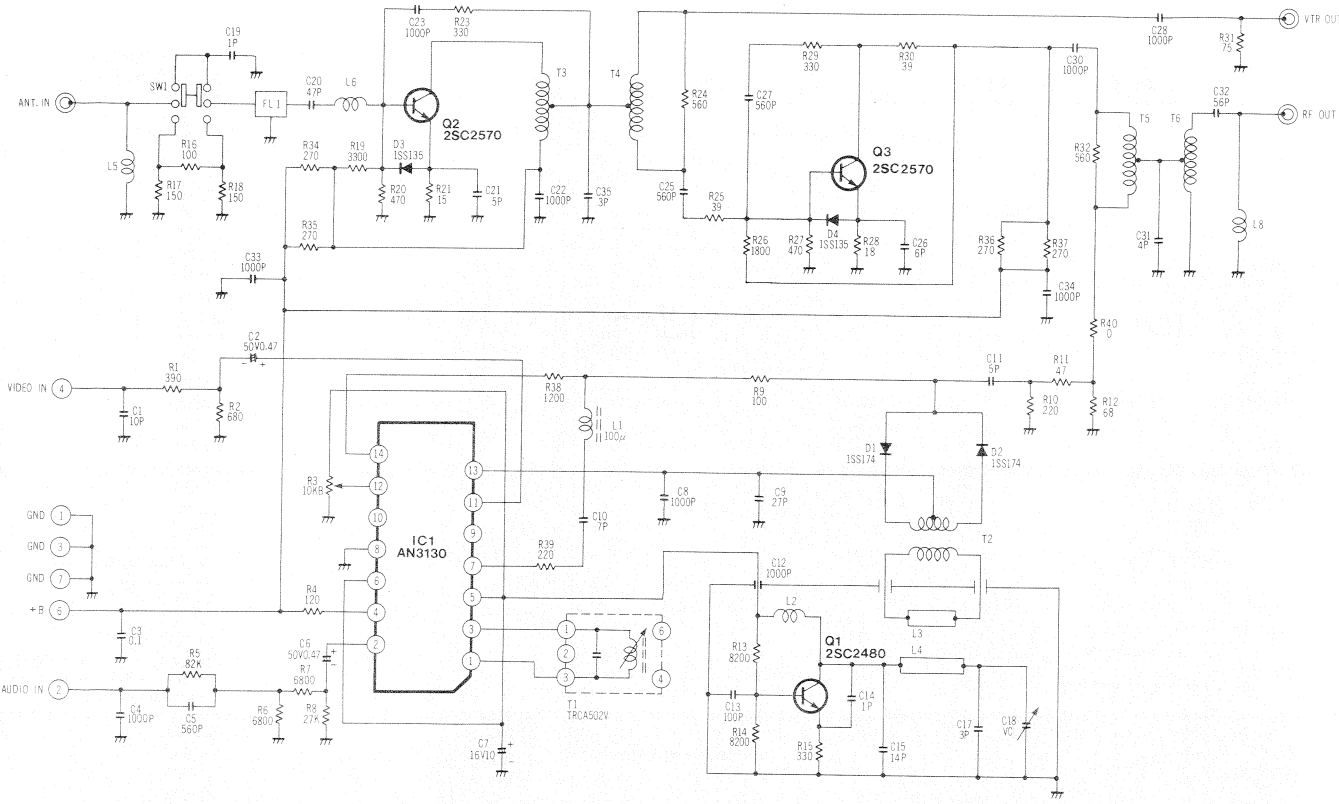
3-33. TIMER & TIMER OPERATION CIRCUIT BOARD (VEP07195A, VEP07196A: NV-850E/EG/VEP07195B, VEP07196B: NV-850B)



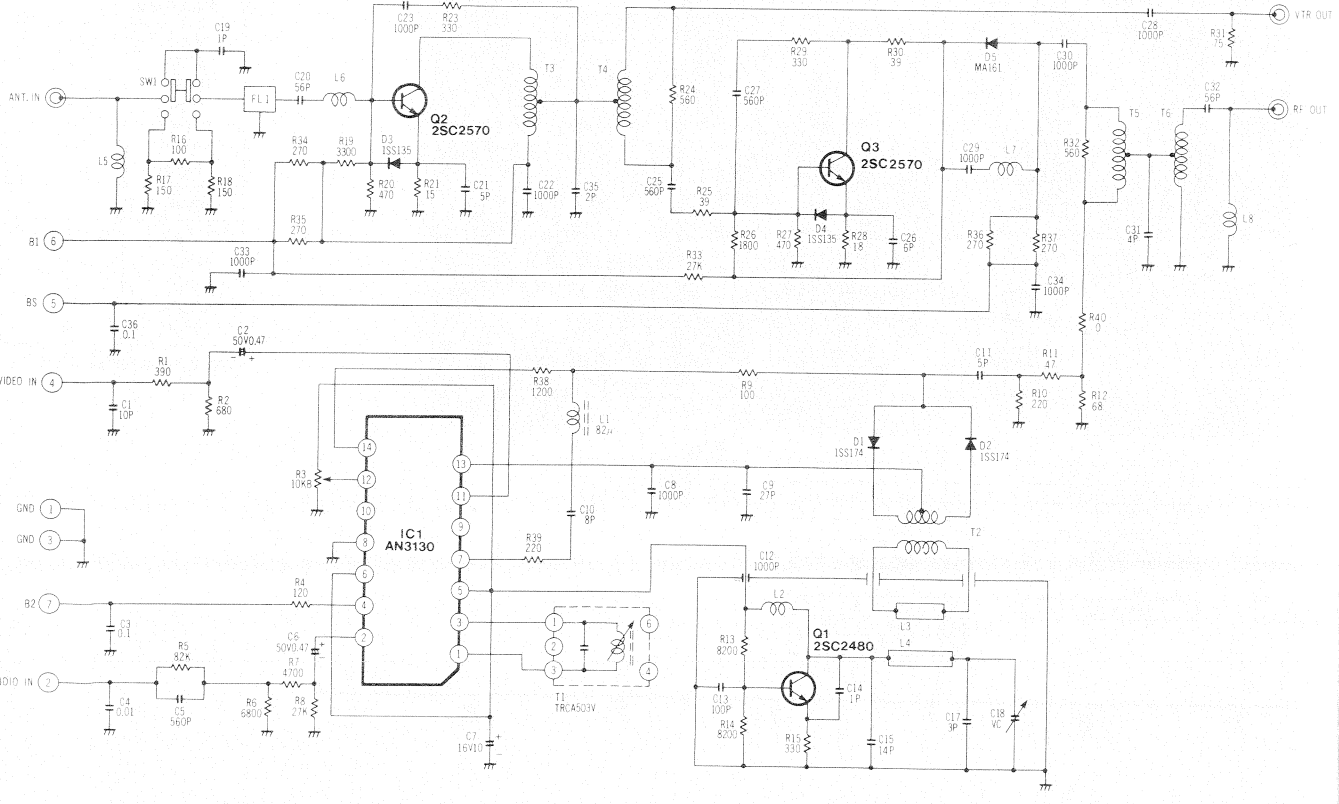
TIMER & TIMER OPERATION CIRCUIT BOARD		
Transistor		
Q7501	B-5	
Q7503	B-5	
Q7506	C-6	
Q7507	B-7	
Q7508	B-7	
Q7510	C-8	
Q7511	C-8	
Q7513	C-5	
Q7514	C-5	
Q7515	C-5	
Q7520	D-8	
Q7522	D-6	
Q7523	A-3	
Q7524	A-3	
Q7525	A-3	
Q7526	A-3	
Q7580	E-3	
Q7581	E-3	
Transistor & Resistor		
QR7501	B-2	
QR7502	B-3	
QR7503	B-6	
QR7504	D-3 (E/EG)	
Integrated Circuit		
IC7501	C-6	
IC7502	C-3	
IC7503	D-7	
IC7504	D-8	
IC7505	B-7	
IC7506	A-2	
IC7580	E-3	
Test Point		
TP7501	C-6	
TP7503	B-7	
TP7504	C-6	
TP7505	B-7	
TP7506	B-8	
TP7507	E-4	
TP7581	E-3	
Adjustment		
R7509	C-5	
R7533	E-6	
R7535	B-8	
C7502	C-5	
T7580	E-2	

ADDRESS INFORMATION

3-34. RF CONVERTER SCHEMATIC DIAGRAM — UNIT No. ENC87751 —

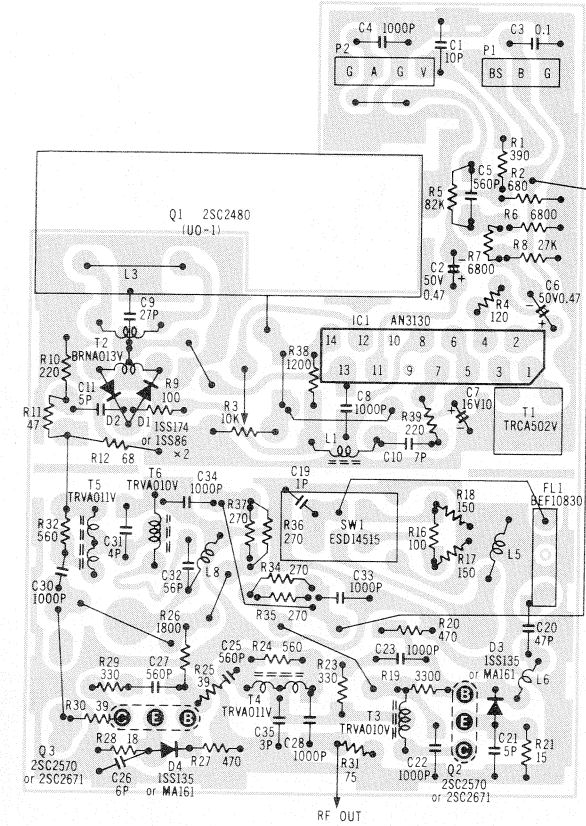


— UNIT No. ENC87752 —

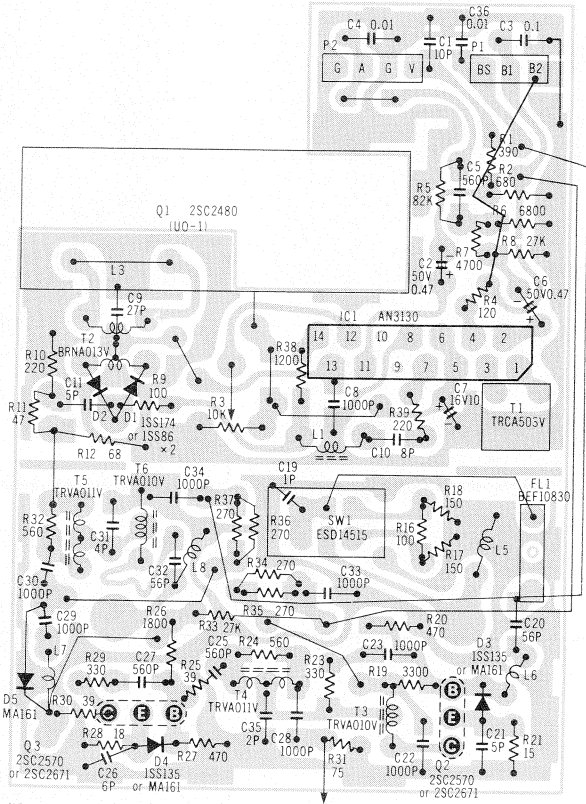


Back Page:
TIMER & TIMER OPERATION Section

3-35. RF CONVERTER CIRCUIT BOARD — UNIT No. ENC87751 —



— UNIT No. ENC87752 —



NOTE: THE CHIP PARTS ARE RED COLOUR.

SERVO CIRCUIT BOARD			
Transistor			
Q2001	G-11		
Q2002	F-12		
Q2003	F-12		
Q2004	F-9		
Q2005	E-9		
Q2006	F-9		
Transistor & Resistor			
QR2001	G-12		
QR2002	G-10		
QR2003	F-12		
QR2004	F-11		
QR2006	F-11		
QR2007	G-10		
QR2008	G-10		
QR2009	E-8		
QR2010	F-8		
Integrated Circuit			
IC2001	G-11		
IC2002	G-10		
IC2003	G-8		
IC2004	G-12		
IC2005	F-11		
IC2007	F-8		
IC2008	G-10		
IC2009	G-9		
IC2010	F-10		
Test Point			
TP2001	G-10		
TP2002	G-10		
TP2003	G-11		
TP2004	G-11		
TP2005	G-7		
TP2007	G-10		
TP2009	F-10		
TP2010	F-9		
TP2011	G-11		
TP2013	F-9		
TP2014	F-8		
TP GND	F-9		
Adjustment			
R2015	D-5		
R2016	G-7		
R2018	G-8		
R2066	F-7		
R2072	E-8		
R2073	G-9		
R2085	F-7		

ADDRESS INFORMATION

LUMINANCE & CHROMINANCE CIRCUIT BOARD			
Transistor			
Q3001	B-12		
Q3002	B-12		
Q3004	C-12		
Q3005	C-12		
Q3006	C-12		
Q8001	C-11		
Q8003	C-10		
Q8004	C-10		
Q8006	D-12		
Q8007	D-12		
Q8008	D-10		
Q8009	D-10		
Transistor & Resistor			
QR3001	C-12		
QR3002	C-12		
QR3003	C-12		
QR3050	D-11		
QR8002	C-10		
QR8003	B-12		
QR8004	D-10		
Integrated Circuit			
IC3001	B-13		
IC3050	B-9		
IC8001	D-11		
IC8002	B-10		
Test Point			
TP3001	B-12		
TP3051	C-10		
TP8001	D-10		
TP8002	D-11		
TP8003	D-11		
TP8004	D-12		
TP8005	B-10		
TP GND	C-13		
Adjustment			
R3018	D-5		
R3056	B-9		
L8009	B-10		

ADDRESS INFORMATION

POWER SUPPLY CIRCUIT BOARD			
Transistor			
Q1001	E-13		
Q1002	D-15		
Q1003	E-12		
Q1101	D-15		
Q1102	E-12		
Q1103	E-16		
Q1201	D-18		
Q1501	E-15		
Test Point			
TP1001	E-12		
TP1002	E-12		
Adjustment			
R1003	E-12		

ADDRESS INFORMATION

3-36. MAIN CIRCUIT BOARD Power Supply, Servo, Luminance (1), Audio, System Control & Chrominance (VEP03197A: NV-850EG/VEP03197B: NV-850B/VEP03197C: NV-850A)

AUDIO CIRCUIT BOARD		
Transistor		
Q4001	F-7	
Q4002	F-7	
Q4101	F-6	
Q4102	F-6	
Q4105	D-7	
Q4106	F-7	
Q4107	G-7	

Transistor & Resistor		
QR4103	E-6	
QR4104	E-6	

Integrated Circuit		
IC4001	G-6	
IC4002	G-7	
IC4101	E-6	

Test Point		
TP4001	G-6	
TP4002	G-7	
TP4003	G-7	

Adjustment		
R4006	G-6	
R4018	F-7	
R4112	E-6	

ADDRESS INFORMATION

SYSTEM CONTROL CIRCUIT BOARD

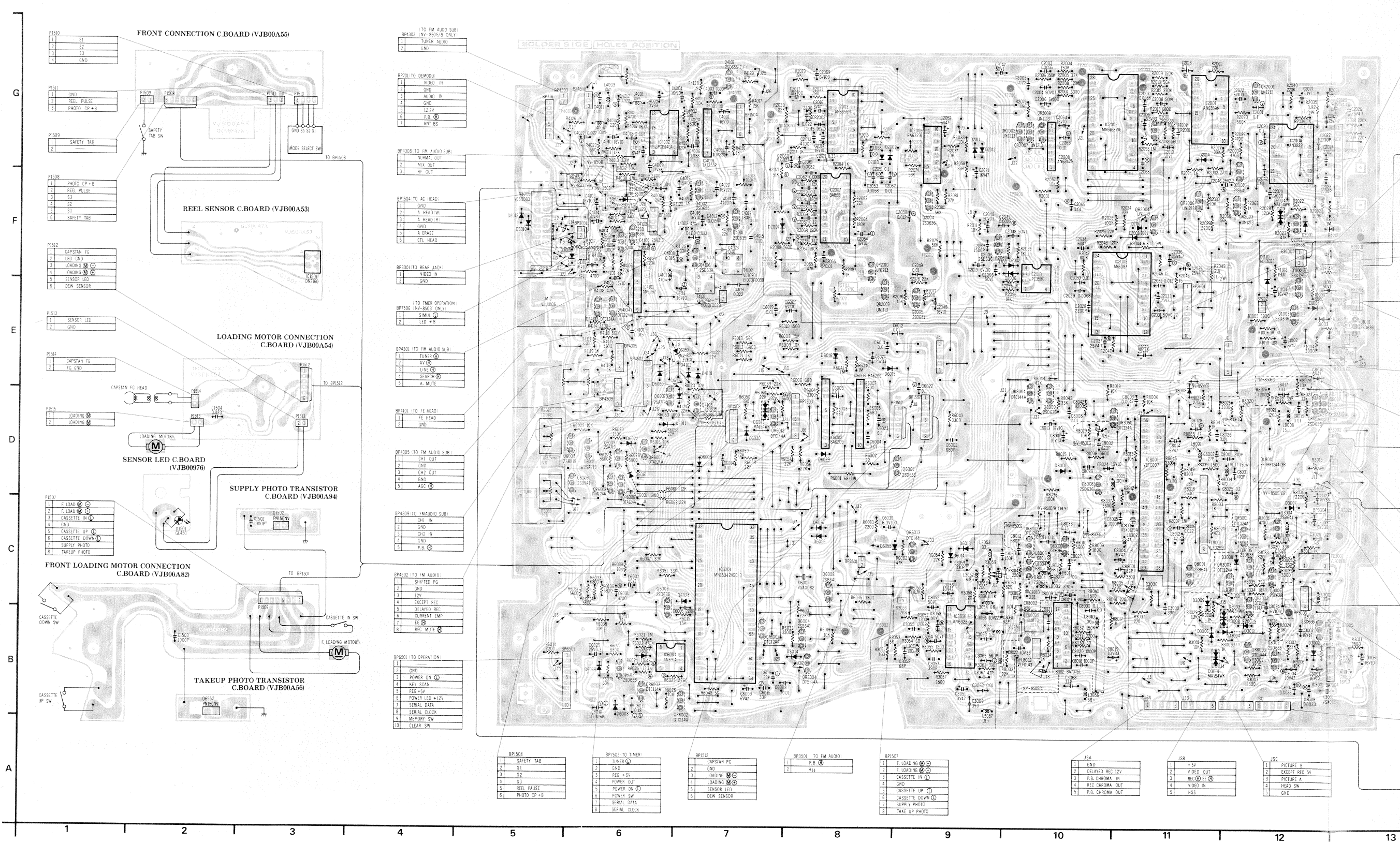
Transistor		
Q1502	C-3	
Q6001	D-9	
Q6002	C-6	
Q6003	D-6	
Q6005	D-6	
Q6006	D-6	
Q6007	D-6	
Q6008	C-8	
Q6009	D-6	
Q6012	B-6	
Q6552	B-2	

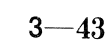
Transistor & Resistor		
QR6001	B-7	
QR6002	B-7	
QR6003	B-6	
QR6004	B-8	
QR6005	D-6	
QR6006	D-6	
QR6008	D-6	
QR6012	D-7	
QR6013	B-9	

Integrated Circuit		
IC6001	C-7	
IC6002	D-8	
IC6003	D-8	
IC6004	B-6	

Test Point		
TP6001	B-8	
TP6002	B-8	

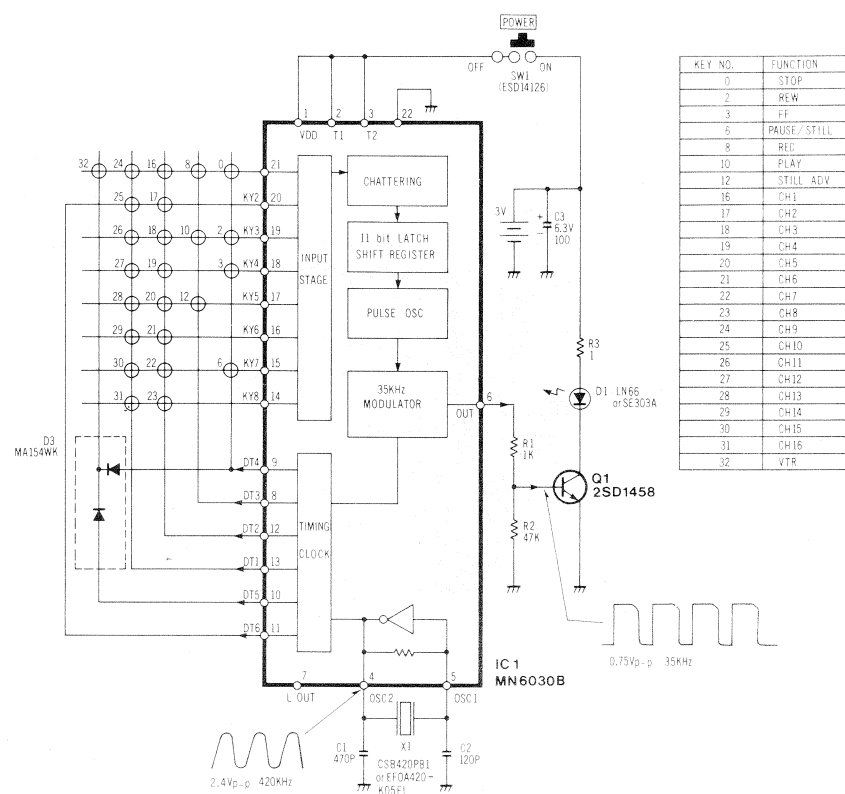
ADDRESS INFORMATION



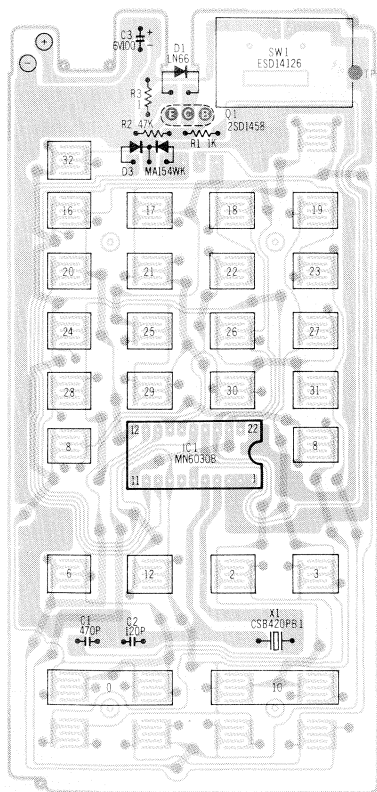


Next Page:
REMOTE CONTROLLER &
CIRCUIT BOARD LAYOUT Section

3-37. REMOTE CONTROLLER SCHEMATIC DIAGRAM AND
CIRCUIT BOARD

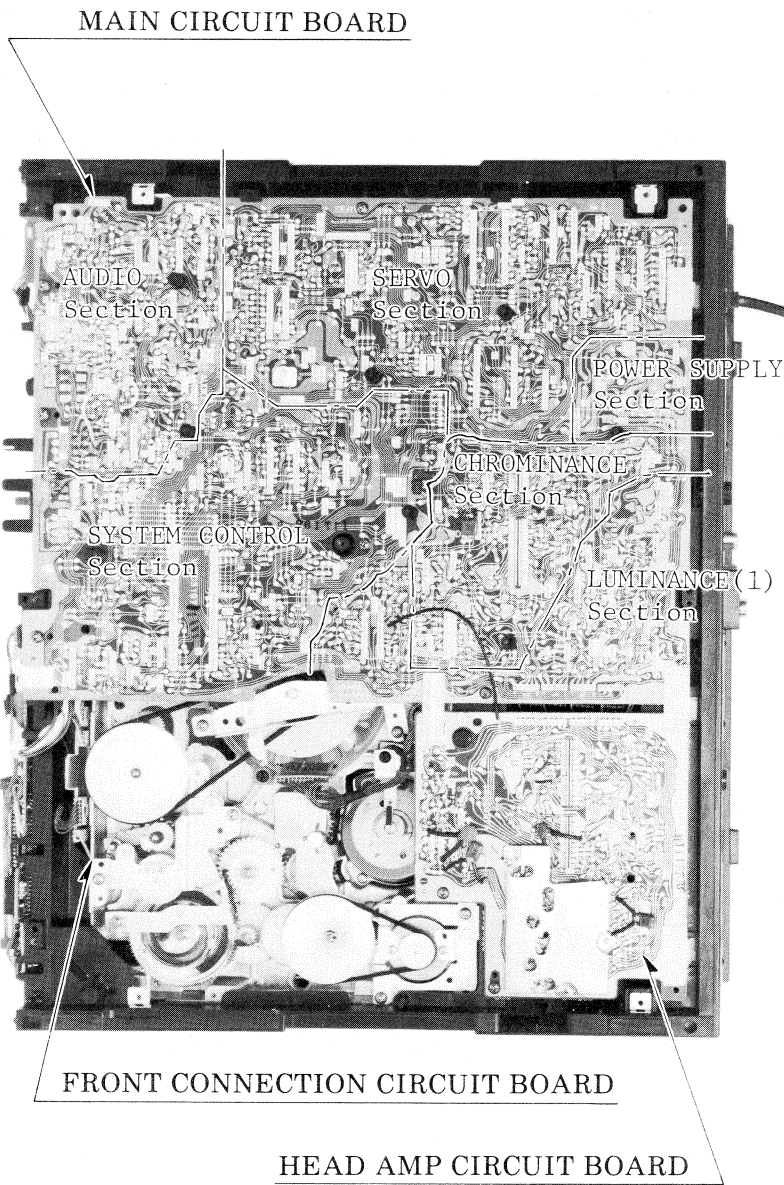


— CIRCUIT BOARD No. VJB00C08 —



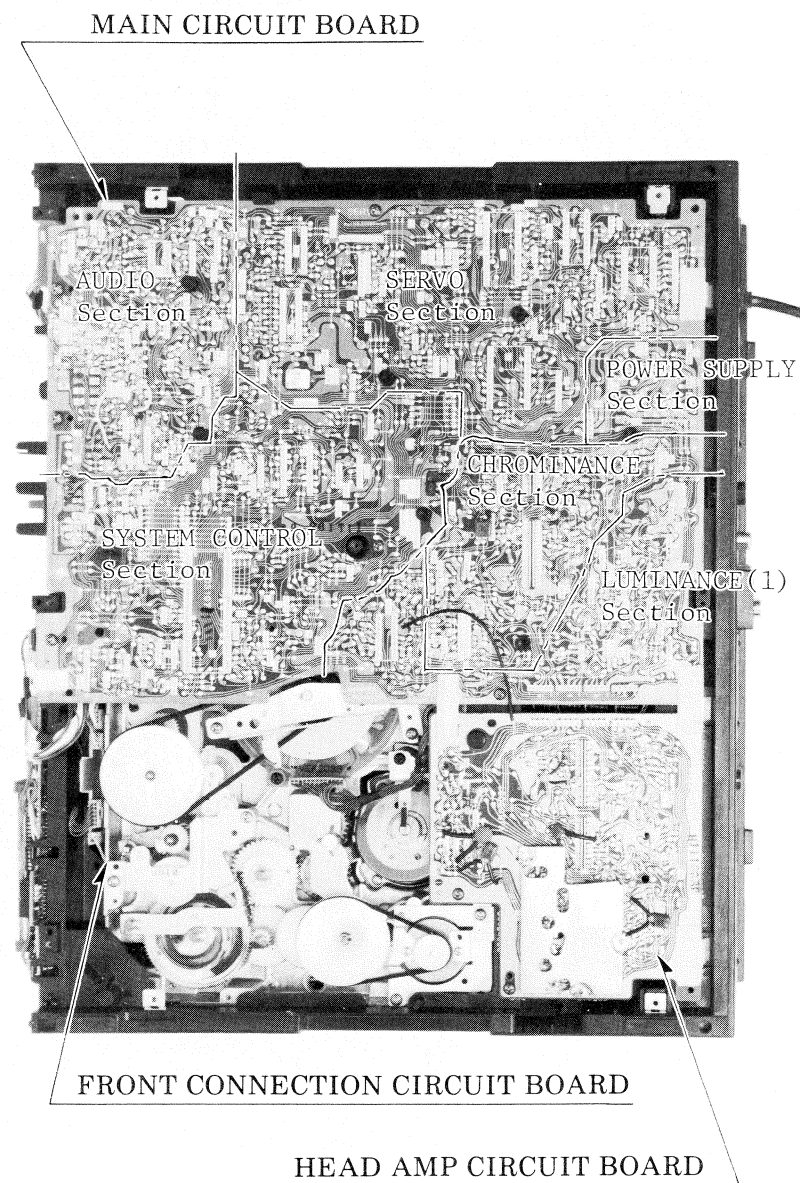
3-38. CIRCUIT BOARD LAYOUT

BOTTOM VIEW

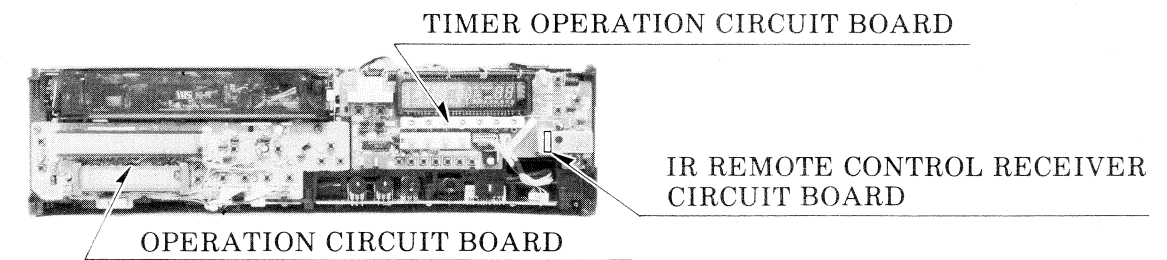


3-38. CIRCUIT BOARD LAYOUT

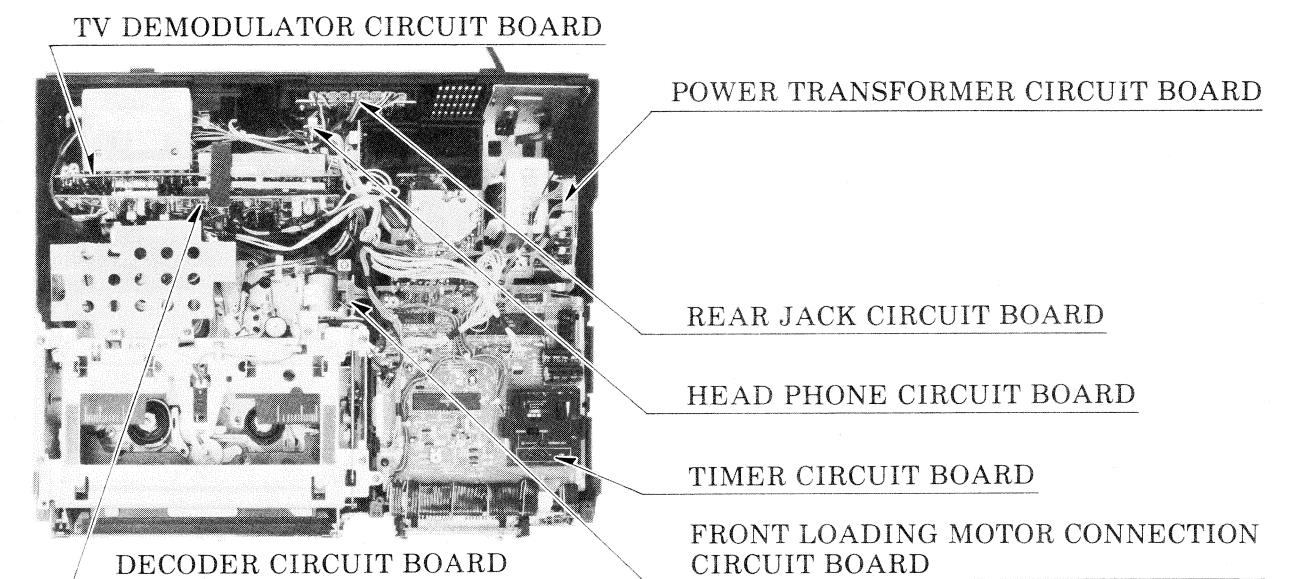
BOTTOM VIEW



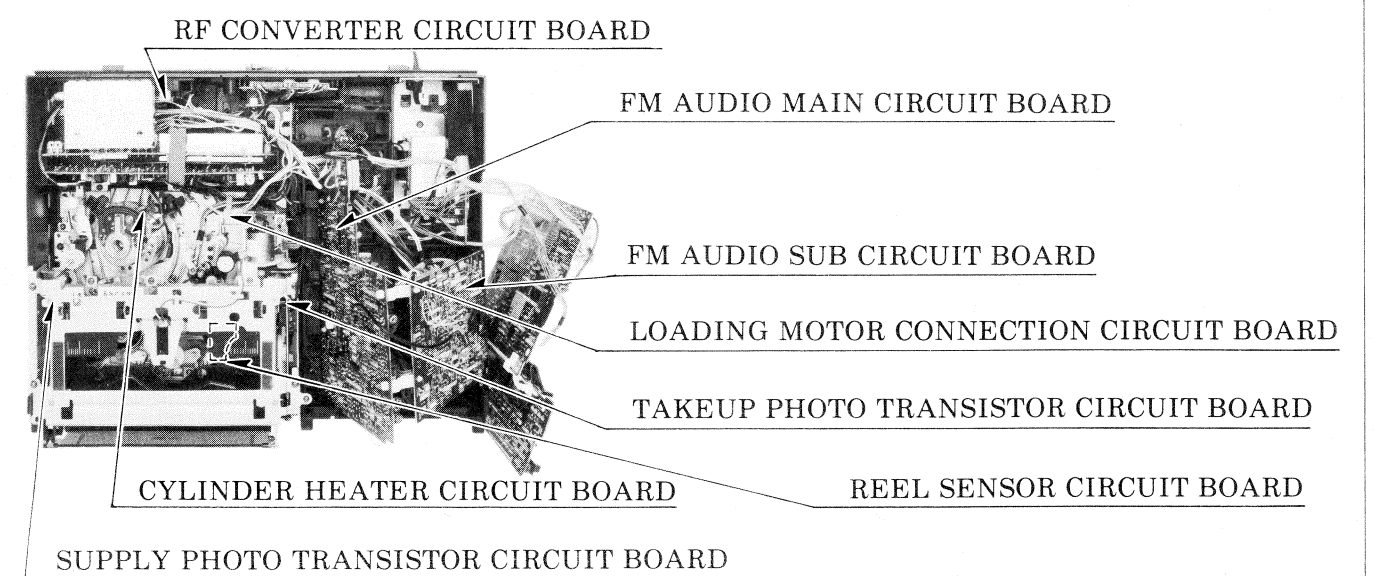
FRONT VIEW



TOP VIEW (1)

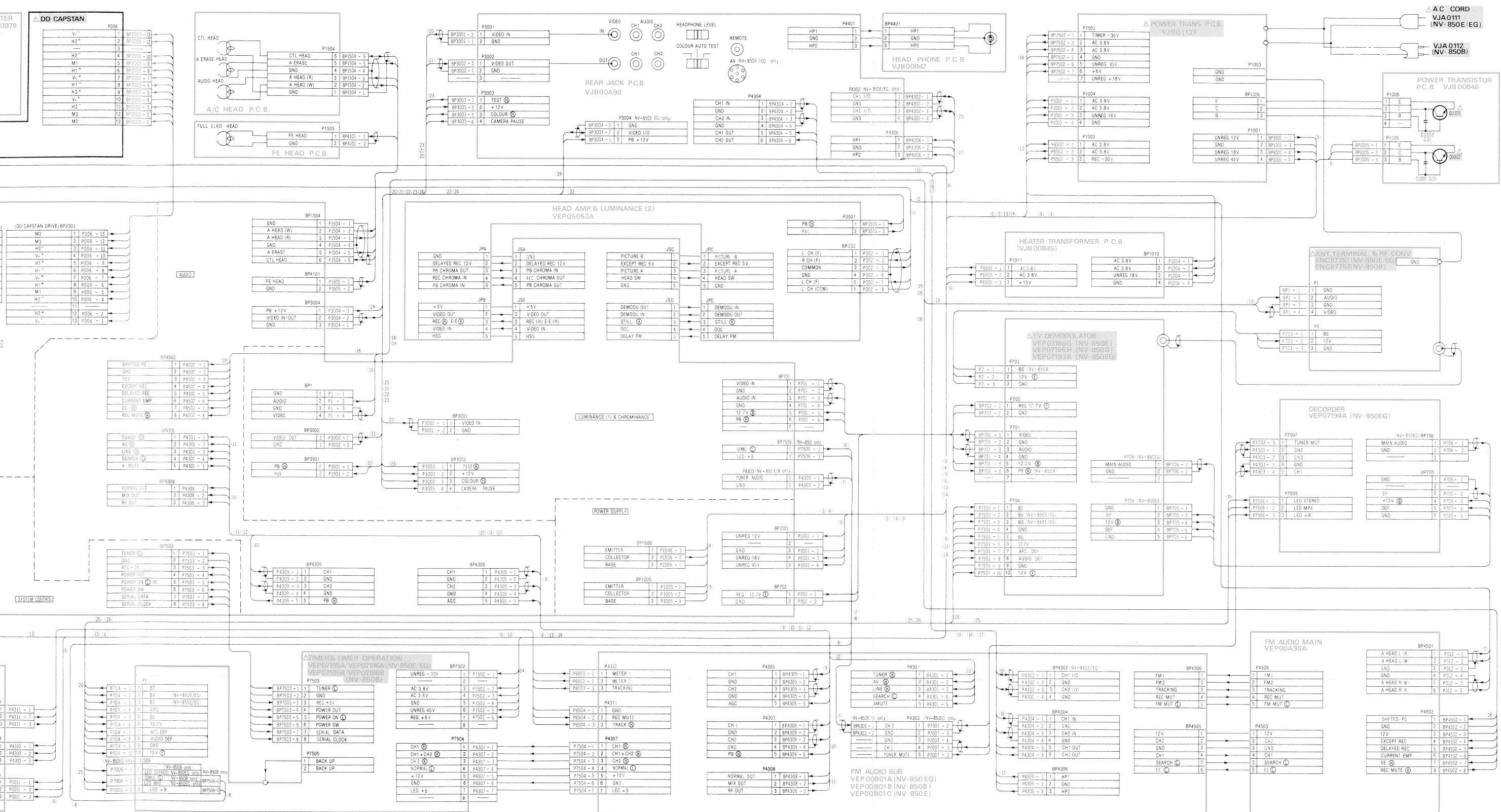


TOP VIEW (2)



A vertical scale from 0 to 100. Tick marks are at 0, 20, 40, 60, 80, and 100. Labels A, B, C, D, E, F, and G are placed to the left of the scale at various heights.





IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN, HAVE SPECIAL CHARACTERISTICS.
IMPORTANT FOR SAFETY WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY
THE SPECIFIED PARTS.

SECTION 4

EXPLODED VIEWS AND PARTS LIST

4.1. INNER PARTS LOCATION

TOP VIEW

Loading Arm [R] Unit (VXL1152)

Loading Arm [L] Unit (VXL0753)

Stator Angle Unit (VXA2006)

Upper Cylinder Unit (VEH0231)

Inclind Base [S] Unit (VXA1964)

FE Head (VBS0030)

Inclind Base [T] Unit (VXA1965)

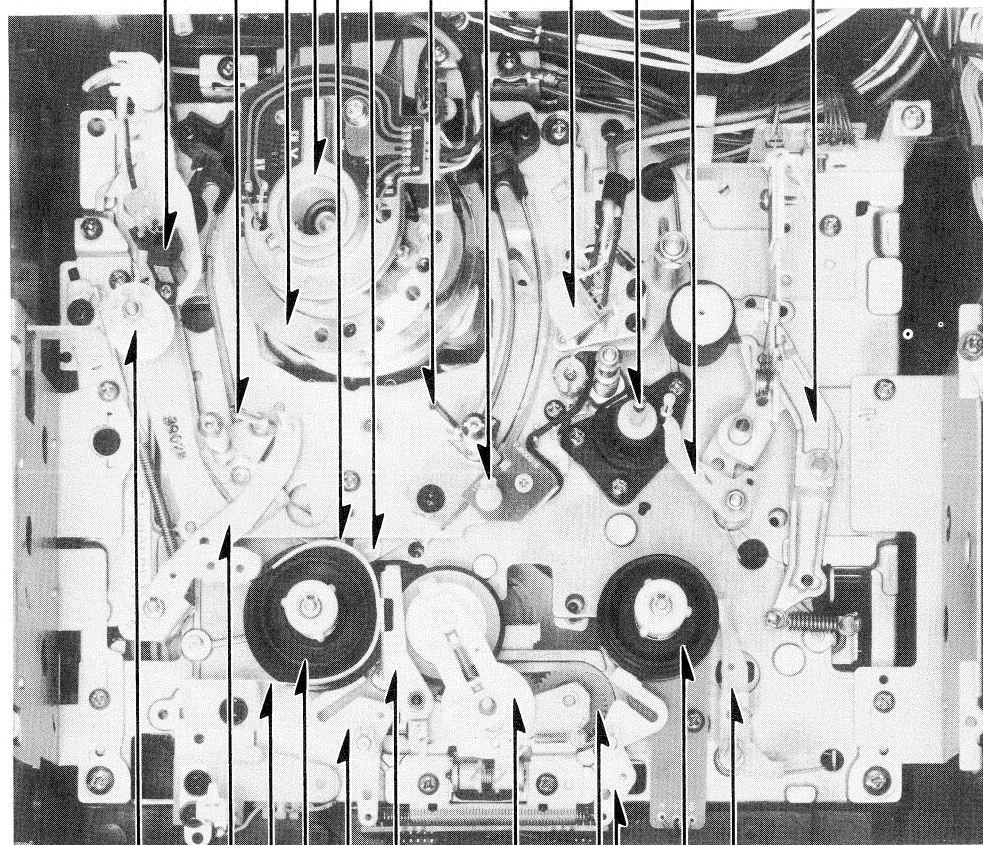
Sensor LED (GL450)

A/C Head (VBR0233)

Capstan Rotor Unit (VXP0525)

P5 Arm Unit (VXL1187)

Pressure Roller Lever Unit
(VXL1154)



Limiter Roller
(VDP0908)

Tension Arm [1] Unit
(VXL1157)

Tension Band Unit (VXZ0165)

Supply Reel Table Unit (VXR0118A)

Brake [S] Unit (VXZ0159)

S Soft Brake Arm Unit (VXZ0166)

T Soft Brake[1] Unit (VXZ0164)

Takeup Reel Table Unit (VXR0119A)

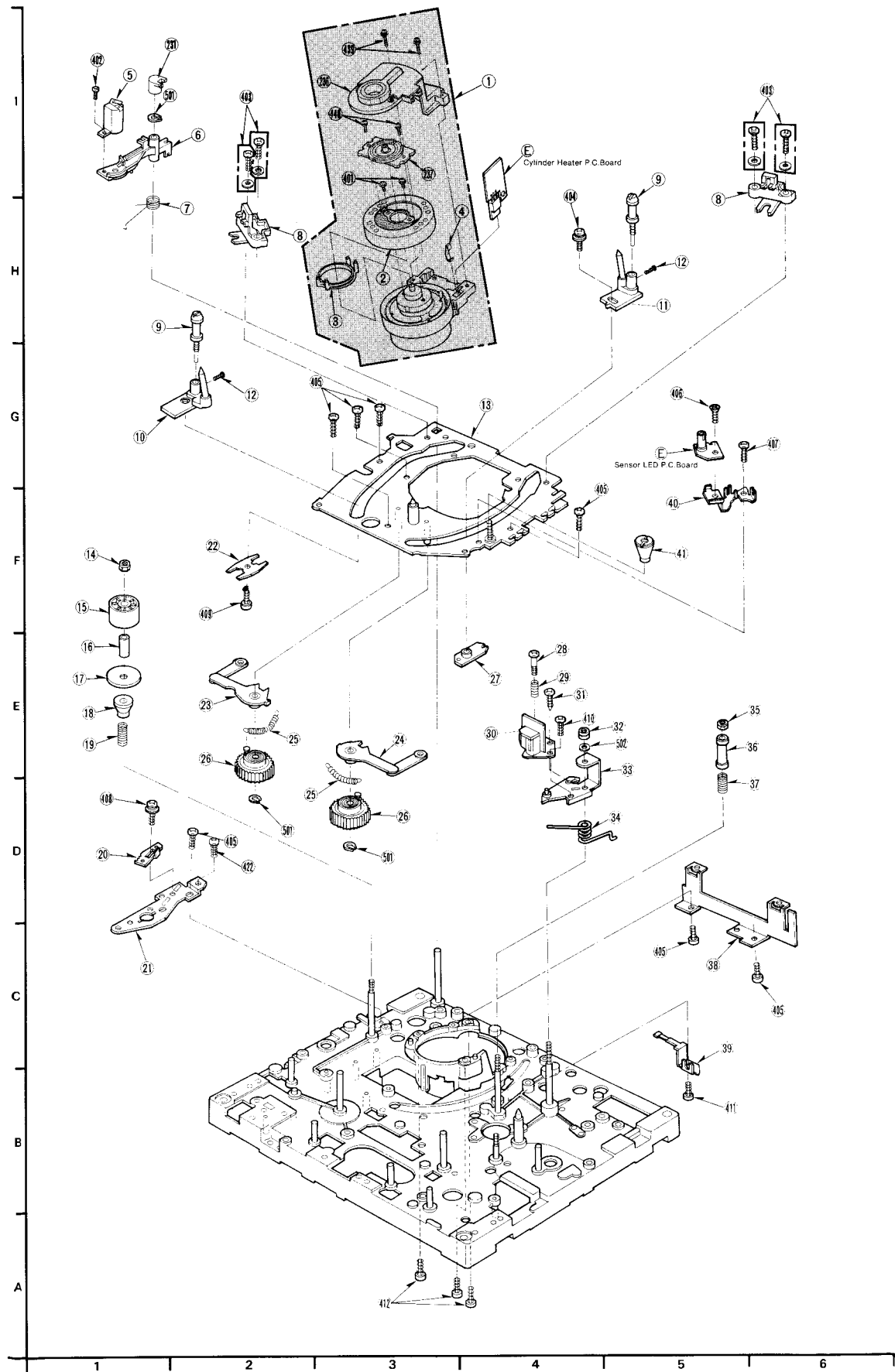
Brake [T] Unit (VXZ0161)

Intermediate Gear [B] (VDG0155)

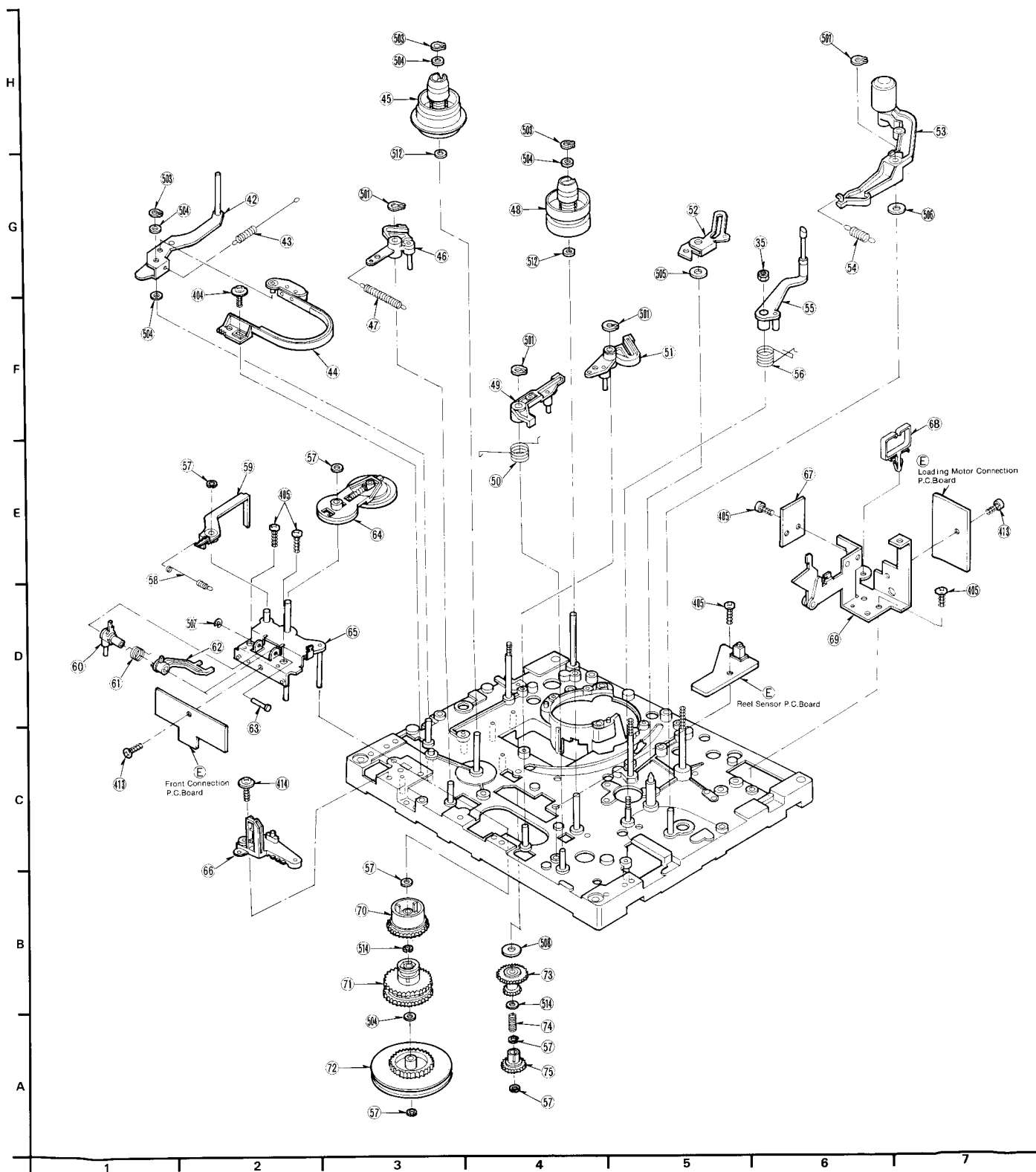
Idler Arm Unit (VXP0521)

4.2. EXPLODED VIEW

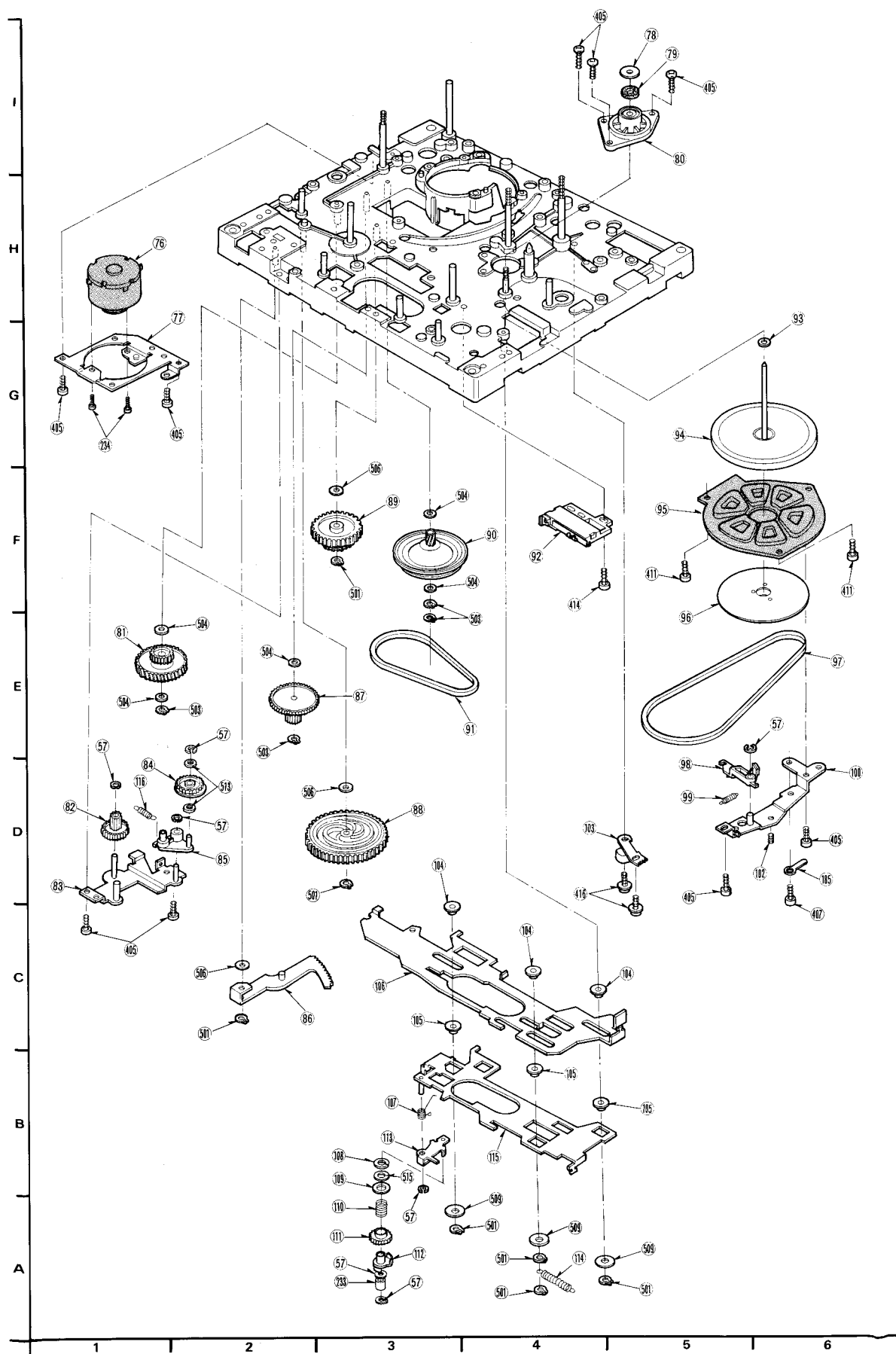
① TRANSPORT SECTION



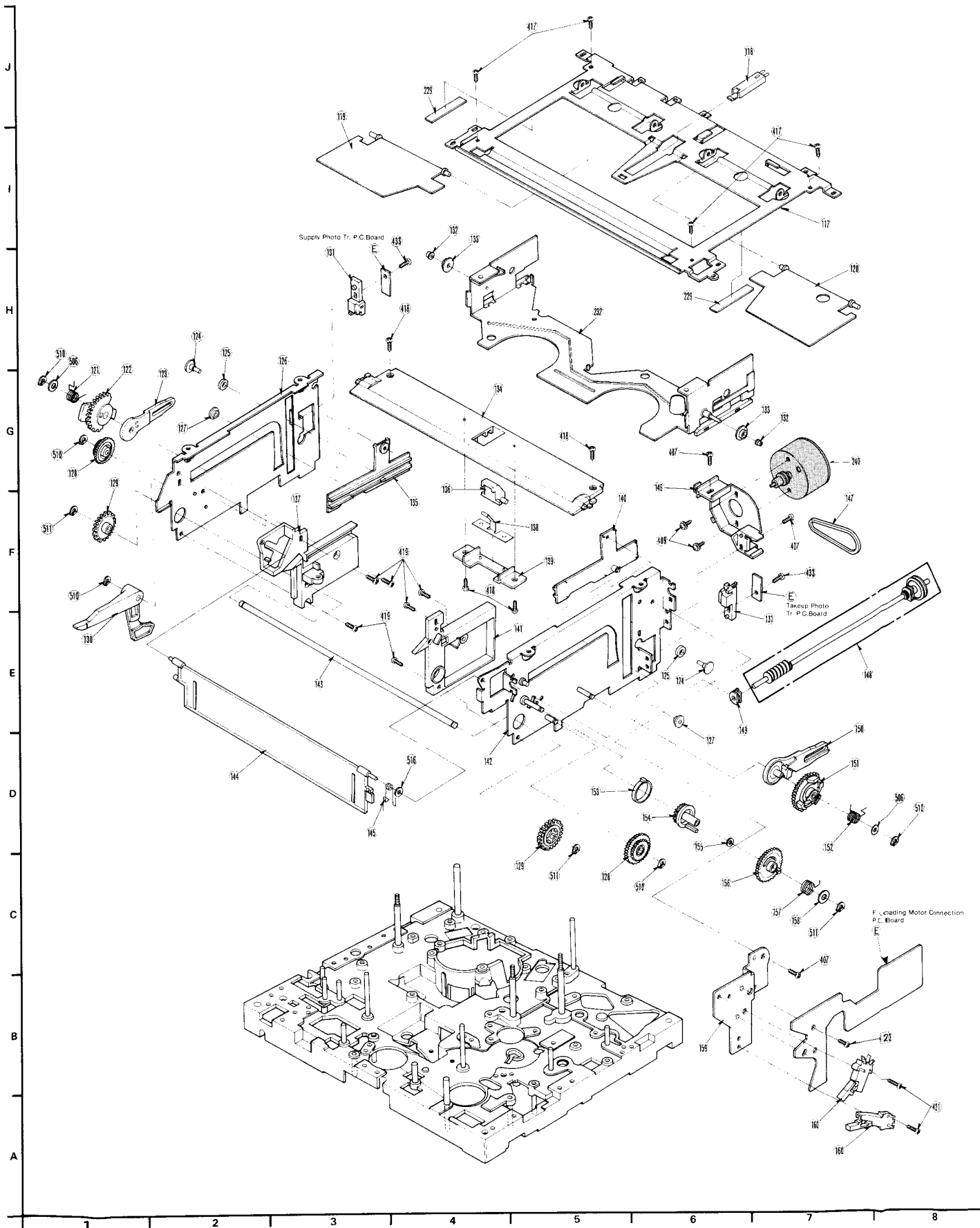
2 MOVING MECHANISM SECTION



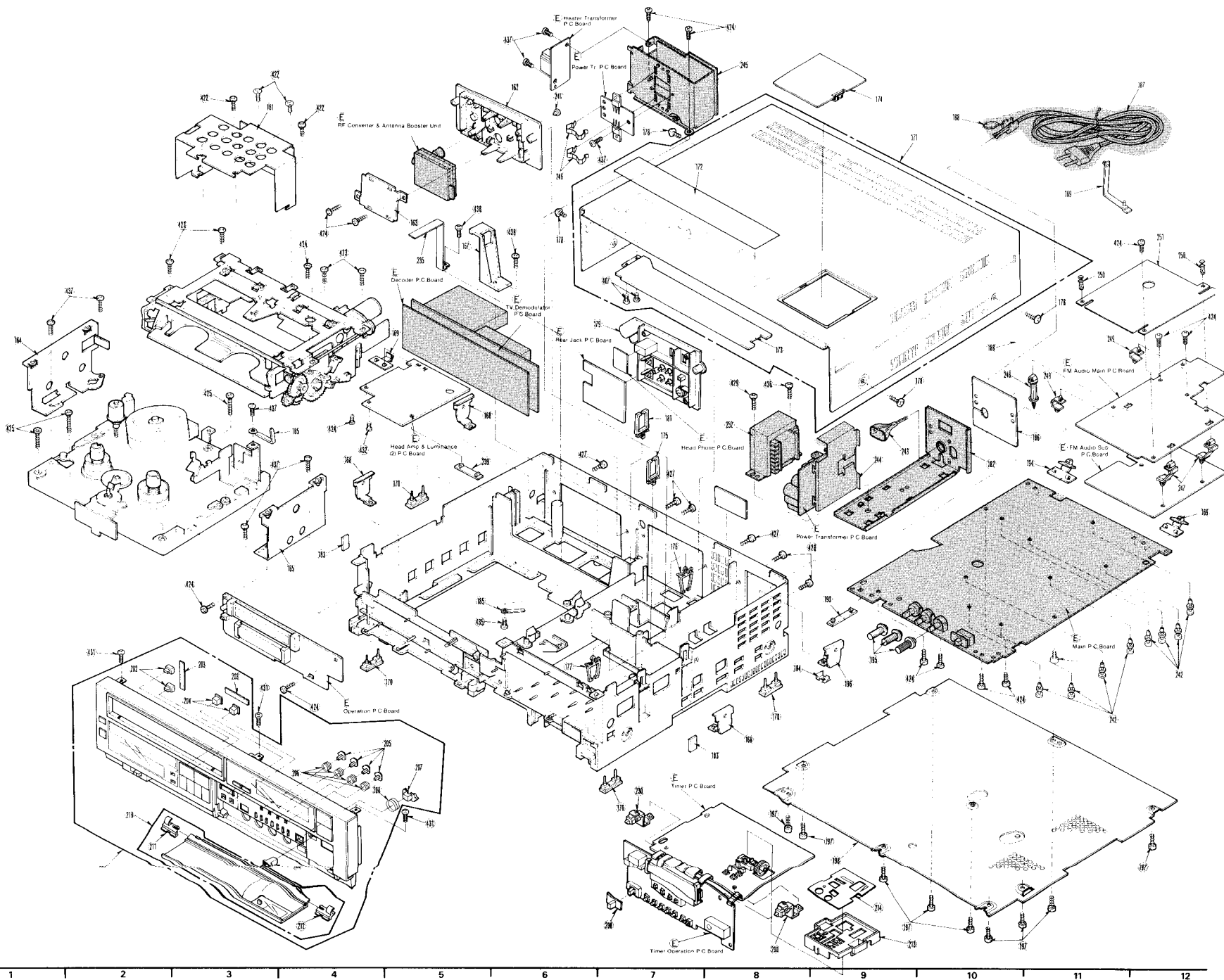
3 CHASSIS PARTS SECTION



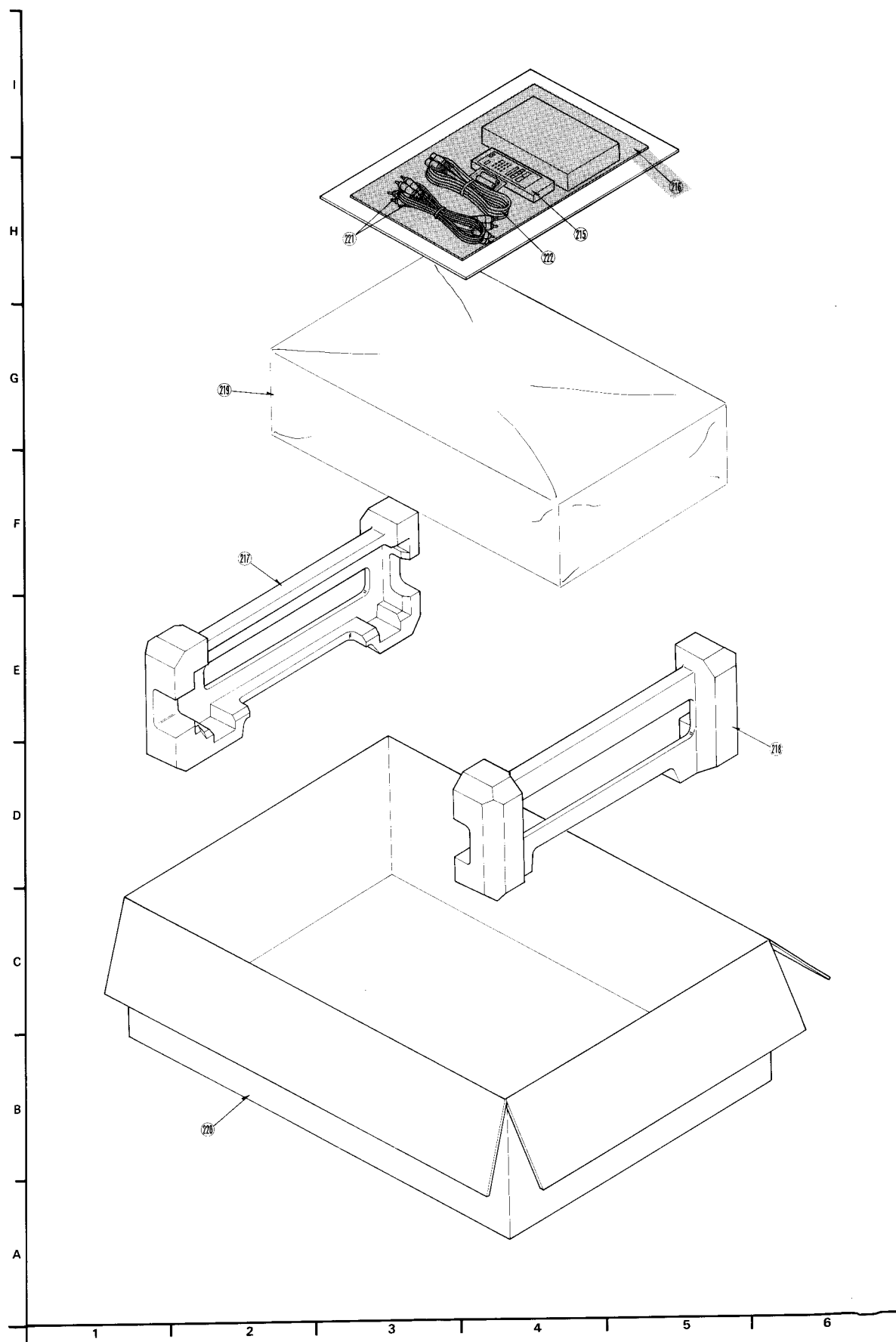
4 CASSETTE UP MECHANISM SECTION



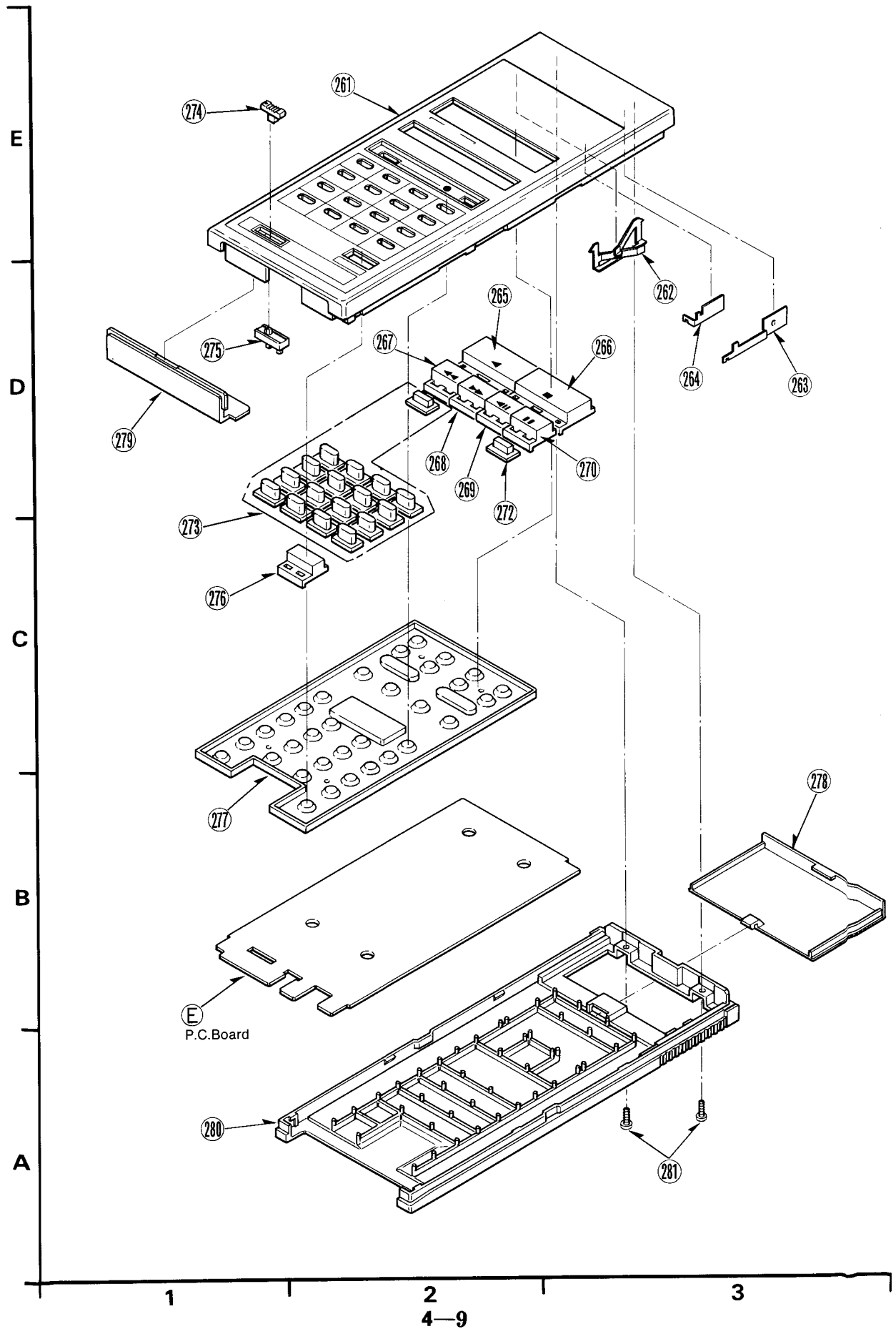
5 CASING PARTS SECTION



6 PACKING PARTS SECTION



7 REMOTE CONTROL UNIT



4-3. MECHANICAL REPLACEMENT PARTS LIST

Notes: 1. * Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified by Δ have special characteristics important for safety. When replacing any of these components, use only the original ones.

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
1(1)	VEG0316	DD Cylinder Unit	1	Δ
2(1)	VEH0231	Upper Cylinder Unit	1	
3(1)	VJR0094	RT Terminal	1	
4(1)	VMC0051	Cylinder Heater P.C.B.	1	
		Pressure Spring		
5(1)	VBS0030	FE Head	1	
6(1)	VML1544	FE Lever	1	
7(1)	VMB1005	FE Lever Spring	1	
8(1)	VMD0570	Post Stopper	2	
9(1)	VXP0444	Roller Post Unit	2	
10(1)	VXA1964	Inclind Base (S) Unit	1	
11(1)	VXA1965	Inclind Base (T) Unit	1	
12(1)	VHD0133	Screw	2	
13(1)	VXA1963	Loading Base (1) Unit	1	
14(1)	VHD0045	Nut	1	
15(1)	VDP0908	Limiter Roller	1	
16(1)	VMX0288	Collar	1	
17(1)	VMX0456	Lower Limiter	1	
18(1)	VMX0663	Limiter Stand	1	
19(1)	VMB0754	Pl Spring	1	
20(1)	VMA6338	Position Adjust Hook	1	
21(1)	VMA6358	Position Plate	1	
22(1)	VMA4436	Shaft Holder Stopper	1	
23(1)	VXL0753	Loading Arm (L) Unit	1	
24(1)	VXL1152	Loading Arm (R) Unit	1	
25(1)	VMB0669	Loading Spring	2	
26(1)	VXP0520	Loading Gear Unit	2	
27(1)	VXA1966	Inclind Adjustment Plate	1	
28(1)	VHD0054	Adjustment Screw (15)	1	
29(1)	VMB0404	Adjustment Spring	1	
30(1)	VBR0233	A/C Head	1	
31(1)	VHD0089B	Azimuth Adjustment Screw	1	
32(1)	VHN0038	Nylon Nut	1	
33(1)	VXA1571	Head Base Unit	1	
34(1)	VMB1189	A/C Height Spring	1	
35(1,2)	VHN0023	M3 Nylon Nut	2	
36(1)	VMX0647	Post Sleeve	1	
37(1)	VMB1235	P4 Spring	1	
38(1)	VMA6357	Chassis Bracket	1	
39(1)	VXS0059	Earth Plate Unit	1	
40(1)	VMA6353	LED Holder Angle	1	
41(1)	VHN0031	"X" Adjustment Nut	1	
42(2)	VXL1157	Tension Arm (1) Unit	1	
43(2)	VMB1187	Tension Spring	1	
44(2)	VXZ0165	Tension Band Unit	1	
45(2)	VXR0118A	Supply Reel Table Unit	1	
46(2)	VXZ0159	Brake (S) Unit	1	
47(2)	VMB0661	Brake Arm Spring	1	
48(2)	VXR0119A	Takeup Reel Table Unit	1	
49(2)	VXZ0164	T Soft Brake (1) Unit	1	
50(2)	VMB1186	Soft Brake Spring	1	
51(2)	VXZ0161	Brake (T) Unit	1	
52(2)	VML1532	P5 Pull Out Lever	1	
53(2)	VXL1154	Pressure Roller Lever Unit	1	
54(2)	VMB1188	Pin Pressure Spring	1	
55(2)	VXL1187	P5 Arm Unit	1	
56(2)	VMB1217	P5 Spring	1	
57(2,3)	VMX0653	Cut Washer	14	
58(2)	VMB1198	S Soft Brake Spring	1	

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
59(2)	VXZ0166	S Soft Brake Arm Unit	1	
60(2)	VXL1169	Select Lever (A) Unit	1	
61(2)	VMB1197	Select Lever Spring	1	
62(2)	VML1533	Select Lever (B)	1	
63(2)	VMS2504	Select Lever Shaft	1	
64(2)	VXP0521	Idler Arm Unit	1	
65(2)	VXA1968	Center Base Plate	1	
66(2)	VES0243	Safety Switch Unit	1	
67(2)	VEK2054	Dew Sensor Unit	1	
68(2)	VJF0004	Wire Saddle	1	
69(2)	VXA1970	Opener Angle Unit	1	
70(2)	VDG0147	Clutch Gear	1	
71(2)	VXP0523	Clutch Gear Unit	1	
72(2)	VDP0951	Clutch Pulley	1	
73(2)	VDG0155	Intermediate Gear (B)	1	
74(2)	VMB1195	Intermediate Gear Lift	1	
		Spring		
75(2)	VDG0156	Intermediate Gear (A)	1	
76(3)	VEM0200	Loading Motor	1	Δ
77(3)	VMA6360	Loading Motor Bracket	1	
78(3)	VMX0251	Oil Seal	1	
79(3)	VMD0104	Oil Pool	1	
80(3)	VXD0087	Housing Unit	1	
81(3)	VDG0146	Intermediate Gear	1	
82(3)	VDG0151	Kick Gear	1	
83(3)	VXA1972	Kick Base (1) Unit	1	
84(3)	VDG0154	Select Gear	1	
85(3)	VXL1167	Select Gear Lever (1) Unit	1	
86(3)	VXL1168	Sector Gear Unit	1	
87(3)	VDG0145	Intermediate Gear	1	
88(3)	VDG0141	Cam Gear	1	
89(3)	VDG0143	Drive Gear (2)	1	
90(3)	VDG0142	Intermediate Pulley Gear	1	
91(3)	VDV0148	Loading Belt	1	
92(3)	VES0246	Mode Select Switch Unit	1	
93(3)	VMX0265	Thrust Washer	1	
94(3)	VXP0525	Capstan Rotor Unit	1	
95(3)	VEK2129	Capstan Stator Unit	1	Δ
96(3)	VXP0533	Capstan Pulley Unit	1	
97(3)	VDV0149	Capstan Belt	1	
98(3)	VXZ0168	Capstan Soft Brake Unit	1	
99(3)	VMB1204	Capstan Soft Brake Spring	1	
100(3)	VXA1996	Thrust Support Plate	1	
102(3)	VMX0396	Thrust Screw	1	
103(3)	VEH0213	FG Head Unit	1	
104(3)	VMX0308	Slide Washer	3	
105(3)	VMX0122	Slide Washer	3	
106(3)	VXL1158	Main Lever Unit	1	
107(3)	VMB1185	Kick Lever Spring	1	
108(3)	VMX0672	Cut Washer	1	
109(3)	VMX0644	Washer	1	
110(3)	VMB1184	Clutch Spring	1	
111(3)	VDG0153	Clutch Gear (1)	1	
112(3)	VDG0152	Clutch Gear (2)	1	
113(3)	VXL1165	Arm Lever (1) Unit	1	
114(3)	VMB1183	Sub Lever Spring	1	
115(3)	VXL1160	Sub Lever (1) Unit	1	
116(3)	VMB1192	Select Gear Lever Spring	1	
117(4)	VMA6354	Top Plate	1	
118(4)	VSM0047	Cassette In Detect Switch	1	
119(4)	VMD0580	Remains Display Board (L)	1	
120(4)	VMD0581	Remains Display Board (R)	1	
121(4)	VMB1089	Wiper Spring (L)	1	

4-4. ELECTRICAL REPLACEMENT PARTS LIST

Notes: 1. * Be sure to make your orders of replacement parts according to this list.
 2. IMPORTANT SAFETY NOTICE
 Components identified by Δ have special characteristics important for safety. When replacing any of these components, use only the original ones.
 3. Unless otherwise specified,
 All resistors are in OHMS (Ω), 1/4W $\pm$ 5% carbon. K=1,000 Ω , M=1,000K Ω . All capacitors are in MICROFARADS (μ F), $\pm$ 10% P= μ F.

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
	VEP03197A	Main [Power Supply, Servo, Luminance (1), Chrominance, Audio & System Control] P.C. Board Unit	1	NV-850EG Δ
	VEP03197B	Main [Power Supply, Servo, Luminance (1), Chrominance, Audio & System Control] P.C. Board Unit	1	NV-850B Δ
	VEP03197C	Main [Power Supply, Servo, Luminance (1), Chrominance, Audio & System Control] P.C. Board Unit	1	NV-850E Δ
	VEP05053A	Head Amp & Luminance (2) P.C. Board Unit	1	
	VEP06212A	Operation P.C. Board Unit	1	
	VEP07186G	TV Demodulator P.C. Board Unit	1	NV-850E Δ
	VEP07186H	TV Demodulator P.C. Board Unit	1	NV-850B Δ
	VEP07193A	TV Demodulator P.C. Board Unit	1	NV-850EG Δ
	VEP07194A	Decoder P.C. Board Unit	1	NV-850EG
	VEP07195A	Timer P.C. Board Unit	1	NV-850E/EG
	VEP07195B	Timer P.C. Board Unit	1	NV-850B
	VEP07196A	Timer Operation P.C. Board Unit	1	NV-850E/EG
	VEP07196B	Timer Operation P.C. Board Unit	1	NV-850B
	VEP00A99A	FM Audio Main P.C. Board Unit	1	
	VEP00B01A	FM Audio Sub P.C. Board Unit	1	NV-850EG
	VEP00B01B	FM Audio Sub P.C. Board Unit	1	NV-850B
	VEP00B01C	FM Audio Sub P.C. Board Unit	1	NV-850E
	ENC87751	RF Converter Unit	1	NV-850E/EG Δ
	ENC87752	RF Converter Unit	1	NV-850B Δ
	VJB00A53	Reel Sensor P.C. Board	1	
	VJB00A54	Loading Motor Connection P.C. Board	1	
	VJB00A55	Front Connection P.C. Board	1	
	VJB00A56	Takeup Photo Transistor P.C. Board	1	
	VJB00A82	F. Loading Motor Connection P.C. Board	1	
	VJB00A94	Supply Photo Transistor P.C. Board	1	
	VJB00A98	Rear Jack P.C. Board	1	
	VJB00B45	Heater Transformer P.C. Board	1	
	VJB00B46	Power Transistor P.C. Board	1	
	VJB00B47	Head Phone P.C. Board	1	
	VJB00B64	IR Remote Control Reciever P.C. Board	1	
	VJB00B78	Cylinder Heater P.C. Board	1	
	VJB00976	Sensor LED P.C. Board	1	
	VJB01137	Power Transformer P.C. Board	1	Δ
	VJB00C08	IR Remote Control Transmitter P.C. Board	1	
	VTP0105	Power Transformer	1	NV-50E/EG Δ
	VTP0104	Power Transformer	1	NV-50B Δ
	VMZ0562	Barrier	1	Δ
	XTV4+8F	Screw	1	
	VJF0052	Binder	5	
	VJF0055	Binder	6	

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
	VEP03197A/B/C	Main[Power Supply, Servo, Luminance (I), Chrominance, Audio & System Control]P.C.Board Unit					Transistors		
		(Power Supply Section)			Q2001,2002	2SD636		2	(P,Q,R,S,T) or 2SC2021M(Q,R,S,E)
		Transistors			Q2003	2SB641		1	(P,Q,R,S) or 2SA937M(Q,R,S)
Q1001	2SD636		1	(Q,R,S,T) or 2SC2021M (Q,R,S,E)	Q2004	2SD636		1	(P,Q,R,S,T) or 2SC2021M (Q,R,S,E)
Q1003	2SD636		1	(Q,R,S,T) or 2SC2021M (Q,R,S,E)	Q2005	2SB641		1	(P,Q,R,S) or 2SA937M (Q,R,S)
Q1102	2SD1265		1	△	Q2006	2SD636		1	(P,Q,R,S,T) or 2SC2021M(Q,R,S,E)
							Combination Parts (Transistor & Resistor)		
		Diodes			QR2001-2003	DTC144A		3	or UN1213
D1002	RD3.9EB1	Zener	1		QR2004	DTA144A		1	or UN1113
D1003,1004	MA165		2		QR2006,2007	DTC144A		2	or UN1213
D1110	RD13EB3	Zener	1		QR2008,2009	DTA144A		2	or UN1113
		Resistors			QR2010	DTC144A		1	or UN1213
R1001	ERQ14LKR39	Metal	0.39	1 △			Diodes		
R1002	ERDS2TJ471		470	1	D2001,2002	MA165		2	
R1003	EVN38CA00B53	Variable	5K	1	D2003	10E1		1	or ERB1201G1
R1004	ERDS2TJ392		3.9K	1	D2004	MA154WK		1	
R1005	EROS2CKG3901	Metal	3.9K	1	D2005-2007	MA165		3	
R1006	EROS2CKG3001	Metal	3K	1	D2009-2014	MA165		6	
R1007	ERDS2TJ103		1K	1			Resistors		
					R2001	ERDS2TJ223		22K	1
R1008	ERDS2TJ682		6.8K	1	R2002	ERDS2TJ272		2.7K	1
R1009	ERDS2TJ472		4.7K	1	R2003	ERDS2TJ472		4.7K	1
R1010	EROS2CKG1800	Metal	180	1	R2004	ERDS2TJ154		150K	1
R1102	ERDS2TJ152		1.5K	1	R2005	ERDS2TJ333		33K	1
		Capacitors			R2006	ERDS2TJ154		150K	1
C1002	ECEA0JK470	Electrolytic 6.3V	47	1	R2007	ERDS2TJ332		3.3K	1
C1003	ECEA1HU470	Electrolytic 50V	47	1 or ECEA1HS470	R2008	ERDS2TJ124		120K	1
C1104	ECEA1CK470	Electrolytic 16V	47	1	R2009	ERDS2TJ154		150K	1
C1004	ECEA0JU470	Electrolytic 6.3V	47	1	R2010	ERDS2TJ563		56K	1
					R2011	ERDS2TJ103		10K	1
					R2012	ERDS2TJ274		270K	1
					R2013	ERDS2TJ682		6.8K	1
					R2014	ERDS2TJ222		2.2K	1
					R2015	EVJ1EAF20B15	Variable	100K	1
					R2016	EVN61AA00B15	Variable	100K	1
		(Servo Section)			R2017	ERDS2TJ102		1K	1
					R2018	EVN61AA00B54	Variable	50K	1
					R2019	ERDS2TJ153		15K	1
		Integrated Circuits			R2020	ERDS2TJ223		22K	1
IC2001	AN6359N		1		R2021	ERDS2TJ391		390	1
IC2002	MN6168VIF		1		R2022	ERDS2TJ563		56K	1
IC2003	AN6356N		1		R2023	ERDS2TJ473		47K	1
IC2004	AN3822		1		R2024,2025	ERDS2TJ223		22K	2
IC2005	AN6387		1		R2026	ERDS2TJ104		100K	1
IC2007	BA855		1		R2027	ERDS2TJ393		39K	1
IC2008	AN6342N		1		R2028	ERDS2TJ124		120K	1
IC2009	BA6323L		1		R2029	ERDS2TJ222		2.2K	1
IC2010	μPC358C		1		R2030,2031	ERDS2TJ103		10K	2
					R2032	ERDS2TJ562		5.6K	1
					R2033	ERDS2TJ103		10K	1

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
R2034	ERDS2TJ105		1M 1		C2014,2015	ECEA1CK100	Electrolytic 50V	10 2	
R2035	ERX12ANJR82	Metal 1/2W 0.82	1 1		C2016	ECEA0JK470	Electrolytic 6.3V	47 1	
R2036	ERDS2TJ102		1K 1		C2017	ECEA10Z100	Electrolytic 10V	10 1	
R2037	ERDS2TJ103		10K 1		C2018	ECQV1H104JZ	Mylar 50V	0.1 1	
R2038-2040	ERDS2TJ224		220K 3		C2019	ECEA0JK101	Electrolytic 6.3V	100 1	
R2041	ERDS2TJ181		180 1		C2020	ECQV1H104JZ	Mylar 50V	0.1 1	
R2042	ERDS2TJ104		100K 1		C2021	ECEA1HK010	Electrolytic 50V	1 1	
R2043	ERDS2TJ124		120K 1		C2022-2024	ECKF1H272KB	Ceramic 50V	2700P 3	
R2044	ERX12ANJR68	Metal 1/2W 0.68	1 1		C2025-2027	ECEA1EK487	Electrolytic 25V	4.7 3	
R2045-2047	ERDS2TJ150		15 3		C2028	ECKF1H222KB	Ceramic 50V	2200P 1	
R2049	ERQ12HJ6R8	Metal 1/2W 6.8	1 A		C2029	VCYG1E682JR	Semiconductor 25V	6800P 1	
R2050	ERDS2TJ563		56K 1		C2030	ECKF1H103ZF	Ceramic 50V	0.01 1	
R2055	ERDS2TJ105		1M 1		C2031	ECEA1HKR22	Electrolytic 50V	0.22 1	
R2056	ERDS2TJ183		18K 1		C2032	VCYG1E123JR	Semiconductor 25V	0.012 1	
R2057	ERDS2TJ103		10K 1		C2033	ECEA1EK3R3	Electrolytic 25V	3.3 1	
R2058	ERDS2TJ333		33K 1		C2034	ECEA1CK470UJ	Electrolytic 16V	47 1	
R2059	ERDS2TJ102		1K 1		C2035-2037	ECEA1EN4R7SE	Electrolytic 25V	4.7 3	
R2060	ERDS2TJ472		4.7K 1		C2038	ECEA1HKN010	Electrolytic 50V	1 1	
R2063	ERDS2TJ102		1K 1		C2039	ECKF1H152KB	Ceramic 50V	1500P 1	
R2064	ERDS2TJ184		180K 1		C2040	ECEA1HK0R1	Electrolytic 50V	0.1 1	
R2065	ERDS2TJ473		47K 1		C2041	ECQB1H222KH	Mylar 50V	2200P 1	
R2066	EVN61AA00B54	Variable	50K 1		C2042	ECKF1H103ZF	Ceramic 50V	0.01 1	
R2067	ERDS2TJ184		180K 1		C2046	ECEA1EKN2R2	Electrolytic 25V	2.2 1	
R2068	ERDS2TJ154		150K 1		C2047	ECEA1HK010	Electrolytic 50V	1 1	
R2069	ERDS2TJ683		68K 1		C2048	ECEA1CK100	Electrolytic 16V	10 1	
R2070	ERDS2TJ184		180K 1		C2049	VCYG1E103JR	Semiconductor 25V	0.01 1	
R2071	EROS2CKG5102	Metal	51K 1		C2050	VCYG1E123JR	Semiconductor 25V	0.012 1	
R2072	EVTK4CA00B15	Variable	100K 1		C2051	ECQV1H104JZ	Mylar 50V	0.1 1	
R2073	EVN3ACA00B54	Variable	50K 1		C2052	ECEA0JK470	Electrolytic 6.3V	47 1	
R2074	ERDS2TJ563		56K 1		C2053	VCYG1E682JR	Semiconductor 25V	6800P 1	
R2075	ERDS2TJ151		150 1		C2054	ECEA16Z10	Electrolytic 16V	10 1	
R2076	ERDS2TJ153		15K 1		C2055	VCYG1E103JR	Semiconductor 25V	0.01 1	
R2077	ERDS2TJ222		2.2K 1		C2056,2057	ECQV1H124JZ	Mylar 50V	0.12 2	
R2078	ERDS2TJ223		22K 1		C2058	ECQV1H154JZ	Mylar 50V	0.15 1	
R2079,2080	ERDS2TJ563		56K 2		C2059	ECQV1H124JZ	Mylar 50V	0.12 1	
R2081	ERDS2TJ273		27K 1		C2060	ECQB1H272KH	Mylar 50V	2700P 1	
R2082	ERDS2TJ223		22K 1		C2061	ECQB1H822KH	Mylar 50V	8200P 1	
R2083	EROS2CKG3002	Metal	30K 1		C2062	ECQB1H682KH	Mylar 50V	6800P 1	
R2084	ERDS2TJ102		1K 1		C2063	VCYG1E103JR	Semiconductor 25V	0.01 1	
R2085	EVN61AA00B15	Variable	100K 1		C2064	ECEA1CK100	Electrolytic 16V	10 1	
R2087	ERDS2TJ102		1K 1		C2065	VCYG1E103JR	Semiconductor 25V	0.01 1	
R2088	ERDS2TJ562		5.6K 1		C2066	ECEA1HK010	Electrolytic 50V	1 1	
R2089	ERDS2TJ472		4.7K 1		C2067	ECQB1H103KH	Mylar 50V	0.01 1	
R2090	ERDS2TJ564		560K 1		C2068	ECQV1H104JZ	Mylar 50V	0.1 1	
R2091	ERDS2TJ561		560 1		C2069,2070	ECEA0JK101	Electrolytic 6.3V	100 2	
R2092	ERDS2TJ104		100K 1		C2071	ECEA1CK470	Electrolytic 16V	47 1	
R2093	ERDS2TJ105		1M 1		C2072	ECEA0JK101	Electrolytic 6.3V	100 1	
R2094	ERDS2TJ102		1K 1		C2073	ECEA1EU470	Electrolytic 25V	47 1	or ECEA1ES470
		Capacitors					Combination Circuits (Capacitor & Resistor)		
C2001	ECQV1H104JZ	Mylar 50V	0.1 1						
C2003	VCYG1E562JR	Semiconductor 25V	5600P 1		CR2001	EXED472M104T		4700P, 100K 1	
C2004	ECEA1HK0R1	Electrolytic 50V	0.1 1		CR2002	EXED223M222T		0.022, 2.2K 1	
C2005	ECQB1H223KH	Mylar 50V	0.022 1						
C2006	ECEA0JK101	Electrolytic 6.3V	100 1						
C2007	VCYG1E562JR	Semiconductor 25V	5600P 1						
C2008	ECEA1HK0R1	Electrolytic 50V	0.1 1						
C2009	ECEA0JK330	Electrolytic 6.3V	33 1						
C2010	ECEA1HK010	Electrolytic 50V	1 1						
C2011	ECQV1H334JZ	Mylar 50V	0.33 1						
C2012	ECQV1H683JZ	Mylar 50V	0.068 1						
C2013	ECKF1H472ZF	Ceramic 50V	4700P 1						

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
C6010	ECQB1H682JH	Mylar 50V 6800P	1		R8003	ERDS2TJ102	1K	1	
C6011	ECQV1H184JZ	Mylar 50V 0.18	1		R8004	ERDS2TJ471	470	1	
C6012-6014	ECKF1H103ZF	Ceramic 50V 0.01	3		R8005	ERDS2TJ222	2.2K	1	
C6015,6016	ECCF1H330JC	Ceramic 50V 33P	2		R8006	ERDS2TJ103	10K	1	
C6019	ECKF1H103ZF	Ceramic 50V 0.01	1		R8007	ERDS2TJ105	1M	1	
C6022,6023	ECQV1H104JZ	Mylar 50V 0.1	2		R8009	ERDS2TJ182	1.8K	1	
C6024	ECEA1EK330	Electrolytic 25V 33	1		R8010	ERDS2TJ562	5.6K	1	
C6029	ECEA1EK3R3	Electrolytic 25V 3.3	1		R8011	ERDS2TJ272	2.7K	1	
C6030	ECEA0JK101	Electrolytic 6.3V 100	1		R8012,8013	ERDS2TJ103	10K	2	
C6031	ECEA1CK100	Electrolytic 16V 10	1		R8014	ERDS2TJ221	220	1	NV-850EG
					R8015	ERDS2TJ102	1K	1	
		Crystal Oscillator			R8016	ERDS2TJ101	100	1	
X6001	VSX0082		1		R8017	ERDS2TJ102	1K	1	
					R8018	ERDS2TJ562	5.6K	1	
					R8019	ERDS2TJ822	8.2K	1	
					R8020	ERDS2TJ271	270	1	
					R8021	ERDS2TJ122	1.2K	1	
					R8022	ERDS2TJ393	39K	1	
					R8023	ERDS2TJ333	33K	1	
		(Chrominance Section)			R8024	ERDS2TJ471	470	1	
					R8025	ERDS2TJ332	3.3K	1	NV-850EG
					R8026	ERDS2TJ122	1.2K	1	NV-850EG
		P.C.B. Ass'y			R8027	ERDS2TJ272	2.7K	1	NV-850EG
IC8001	VEFC007		1		R8028,8029	ERDS2TJ103	10K	2	NV-850EG
					R8030	ERDS2TJ390	39	1	NV-850EG
					R8031	ERDS2TJ222	2.2K	1	NV-850EG
					R8032	ERDS2TJ154	150K	1	NV-850EG
					R8033	ERDS2TJ223	22K	1	NV-850EG
		Integrated Circuit			R8034	ERDS2TJ102	1K	1	NV-850EG
IC8002	BA7025L		1	NV-850EG	R8035	ERDS2TJ470	47	1	
					R8036	ERDS2TJ104	100K	1	
					R8037,8038	ERDS2TJ562	5.6K	2	
		Transistors			R8040	ERDS2TJ152	1.5K	1	
Q8001	2SB641		1	(P,Q,R,S,T) or 2SA937M(Q,R,S)	R8041	ERDS2TJ102	1K	1	
Q8003,8004	2SD636		2	(P,Q,R,S,T) or 2SC2021M(Q,R,S,E)	R8042	ERDS2TJ822	8.2K	1	
Q8006	2SD636		1	(P,Q,R,S,T) or 2SC2021M(Q,R,S,E)	R8043	ERDS2TJ333	33K	1	
Q8007	2SD636		1	(P,Q,R,S,T) or 2SC2021M(Q,R,S,E)	R8044	ERDS2TJ473	47K	1	
				NV-850EG	R8045	ERDS2TJ392	3.9K	1	
Q8008,8009	2SD636		2	(P,Q,R,S,T) or 2SC2021M(Q,R,S,E)					
		Combination Circuit (Transistor & Resistor)							
QR8002	DTC124A		1	or UN1212 NV-850EG	C8001	ECKF1H221KB	Ceramic 50V 220P	1	
QR8003,8004	DTC144A		2	or UN1213	C8002	ECCF1H270JC	Ceramic 50V 27P	1	
					C8003	ECKF1H472ZF	Ceramic 50V 4700P	1	
					C8004	ECEA1CK470	Electrolytic 16V 47	1	
					C8005	ECKF1H102KB	Ceramic 50V 1000P	1	
					C8006	ECQB1H223KH	Mylar 50V 0.022	1	
					C8007	ECEA10Z100	Electrolytic 10V 10	1	
					C8008	ECKF1H103ZF	Ceramic 50V 0.01	1	
					C8009	ECKF1H471KB	Ceramic 50V 470P	1	
					C8010	VCG1E103KR	Semiconductor 25V 0.01	1	
D8001	MA165		1		C8011	ECQV1H154JZ	Mylar 50V 0.15	1	
D8002	MA165		1	NV-850EG	C8012	ECKF1H681KB	Ceramic 50V 680P	1	NV-85EG
					C8013	ECEA1CK100	Electrolytic 16V 10	1	
					C8014	ECEA0JK470	Electrolytic 6.3V 47	1	
		Diodes			C8015	ECKF1H103ZF	Ceramic 50V 0.01	1	
					C8016	ECEA0JK470	Electrolytic 6.3V 47	1	
					C8017	ECKF1H103ZF	Ceramic 50V 0.01	1	NV-85EG
					C8018	ECKF1H102KB	Ceramic 50V 1000P	1	NV-85EG
					C8019	ECEA1AK330	Electrolytic 10V 33	1	NV-85EG
					C8020	ECKF1H102KB	Ceramic 50V 1000P	1	NV-85EG
		Resistors			C8021	ECQV1H563JZ	Mylar 50V 0.056	1	NV-85EG
R8001	ERDS2TJ272	2.7K	1		C8022	ECEA1AK330	Electrolytic 10V 33	1	NV-85EG

[illegible]

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
					R7570,7571	ERDS2TJ332	3.3K	2	
					R7575	ERDS2TJ334	330K	1	NV-850E/EG
					R7576	ERDS2TJ223	22K	1	
					R7577	ERDS2TJ473	47K	1	
					R7579	ERDS2TJ473	47K	1	
		Diodes							
D7501,7502	MA165		2				Capacitors		
D7505	LN28WPVT	LED	1		C7501	ECCF1H080DC	Ceramic 50V 8P	1	
D7506,7507	10E2		2	or ERB1202G1	C7502	ECV1Z20X53T	Trimmer 500V 20P	1	
D7509	MA27WB		1		C7503	ECCF1H050CC	Ceramic 50V 5P	1	
D7510	LN28WPVT	LED	1		C7504	ECCF1H330JC	Ceramic 50V 33P	1	
D7520	MA165		1		C7505	ECCF1H220JC	Ceramic 50V 22P	1	
D7521	MA165		1	NV-850E/EG	C7506	ECKF1H103ZF	Ceramic 50V 0.01	1	
D7522	MA165		1		C7507,7508	ECEA1HKR22	Electrolytic 50V 0.22	2	
D7523	LN38GCPP	LED	1		C7510	ECEA1AK101	Electrolytic 10V 100	1	
D7550-7554	MA165		5		C7511	ECKF1H103ZF	Ceramic 50V 0.01	1	
D7561-7563	MA165		3		C7512	ECEA1HKR22	Electrolytic 50V 0.22	1	
D7574	MA165		1		C7513,7514	ECCF1H470J	Ceramic 50V 47	2	
D7597	MA165		1	NV-850B	C7515	ECQV1H104JZ	Mylar 50V 0.1	1	
					C7516	ECQV1H683JZ	Mylar 50V 0.068	1	
					C7517	ECQV1H273JZ	Mylar 50V 0.027	1	or ECQB1H273JH
		Resistors			C7518	ECQV1H823JZ	Mylar 50V 0.082	1	
R7501	ERDS2TJ122		1.2K	1	C7519-7521	ECKF1H103ZF	Ceramic 50V 0.01	3	
R7502	ERC14GJ126	Solid	1.2M	1	C7522	ECEA1JS100	Electrolytic 6.3V 10	1	
R7503,7504	ERDS2TJ102		1K	2	C7523	ECEA1HK010	Electrolytic 50V 1	1	
R7505,7506	ERDS2TJ223		22K	2	C7524	ECKF1H103ZF	Ceramic 50V 0.01	1	
R7507	ERDS2TJ181		180	1	C7527	ECKF1HK4R7	Electrolytic 50V 4.7	1	
R7508	ERDS2TJ334		330K	1	C7528	ECQV1H473JZ	Mylar 50V 0.047	1	
R7509	EVNK6AA00B25	Variable	200K	1	C7530	ECEA1HK010	Electrolytic 50V 1	1	
R7510	ERDS2TJ124		120K	1	C7531	ECEA1CK100	Electrolytic 16V 10	1	
R7511	ERDS2TJ154		150K	1	C7532	ECEA1HK010	Electrolytic 50V 1	1	
R7512	ERDS2TJ104		100K	1	C7533	ECKF1H103ZF	Ceramic 50V 0.01	1	
R7516	ERDS2TJ473		47K	1	C7540-7542	EECW2R3A3R3	Gold Capacitor 2.3V 3.3F	3	
R7517	ERDS2TJ221		220	1	C7543	ECEA1HK010	Electrolytic 50V 1	1	
R7518	ERDS2TJ105		1M	1	C7550	ECCF1H101J	Ceramic 50V 100P	1	
R7526	ERDS2TJ104		100K	1	C7553	ECKF1H103ZF	Ceramic 50V 0.01	1	
R7527	ERDS2TJ104		100K	1	C7554	ECKF1H103ZF	Ceramic 50V 0.01	1	
R7528	ERDS2TJ103		10K	1	C7555	ECQV1H104JZ	Mylar 50V 0.1	1	
R7529	ERDS2TJ473		47K	1					
R7530	ERDS2TJ104		100K	1			Coil		
R7531	ERDS2TJ124		120K	1	L7501	VLQEL05F102K	1mH	1	
R7532	ERDS2TJ122		1.2K	1					
R7533	EWEU2A016B24	Variable	20K	1					
R7534	ERDS2TJ271		270	1					
R7535	EVNK6AA00B14	Variable	10K	1					
R7536	ERDS2TJ103		10K	1			Crystal Oscillators		
R7537	ERDS2TJ473		47K	1	X7501	VSX0071		1	
R7539	ERDS2TJ390		39	1	X7502	VSX0094		1	
R7540	ERDS2TJ820		82	1	X7503	VSX0082		1	
R7541	ERDS2TJ153		15K	1					
R7542	ERDS2TJ473		47K	1					
R7546	ERDS2TJ273		27K	1					
R7547	ERDS2TJ104		100K	1			Switches		
R7548	ERDS2TJ472		4.7K	1	SW7516	VES0213		1	
R7549	ERDS2TJ104		100K	1	SW7517	ESD14137A		1	or VSS0050 NV-850E/EG
R7550	ERDS2TJ391		390	1	SW7518	EVQSB05G		1	
R7551-7556	ERDS2TJ273		27K	6	SW7519,7520	EVQSB05G		2	NV-850E/EG
R7557-7559	ERDS2TJ473		47K	3					
R7560	ERDS2TJ222		2.2K	1					
R7561	ERDS2TJ332		3.3K	1			Connectors		
R7562	ERDS2TJ223		22K	1	P7501	VJP1237	10P	1	
R7567	ERDS2TJ223		22K	1	P7503	VJP1235	8P	1	
R7568	ERDS2TJ332		3.3K	1	P7505	VJP1229	2P	1	

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
C4575	ECQB1H123JH	Mylar 50V 0.012	1		FL4502	VLF0317		1	
C4576,4577	ECEA1CK100	Electrolytic 16V 10	2		FL4503,4504	EIT1QB001B		2	
C4578	ECQB1H103JH	Mylar 50V 0.01	1		FL4505,4506	VLF0305		2	
C4579,4580	ECEA1CK100	Electrolytic 16V 10	2						
C4581,4582	ECEA1EK3R3	Electrolytic 25V 3.3	2						
C4583	ECCF1H101JC	Ceramic 50V 100P	1						
C4584	ECQV1H104JZ	Mylar 50V 0.1	1				Connectors		
C4585	ECKF1H103ZF	Ceramic 50V 0.01	1		P4502	VJP1235	8P	1	
C4586	ECCF1H820JC	Ceramic 50V 82P	1		P4505	VJP1233	6P	1	
C4587,4588	ECCF1H470JC	Ceramic 50V 47P	2		P4506	VJP1232	5P	1	
C4590	ECEA1CK100	Electrolytic 16V 10	1						
C4591	ECEA1CK220	Electrolytic 16V 22	1						
C4592	ECEA1CKN100	Electrolytic 16V 10	1						
C4594	ECQB1H103KH	Mylar 50V 0.01	1				Miscellaneous		
C4595	ECEA1CK100	Electrolytic 16V 10	1			VSC1084	Shield Case (Main)	1	
C4596	ECKF1H221KB	Ceramic 50V 220P	1			VSC1085	Shield Case (Top)	1	
C4597	ECKF1H331KB	Ceramic 50V 330P	1			VSC1086	Shield Case (Bottom)	1	
C4598,4599	ECEA1CK100	Electrolytic 16V 10	2			VJF0108	Rivet	2	
C4602	ECEA1CK100	Electrolytic 16V 10	1			VJF0175	P.C. Board Support	1	
C4603-4608	ECKF1H103ZF	Ceramic 50V 0.01	6			VXA2062	Barrier	1	
C4609	ECEA16210	Electrolytic 16V 10	1						
C4610	ECEA1CK100	Electrolytic 16V 10	1						
C4611	ECEA0JK470	Electrolytic 6.3V 47	1						
C4612	ECKF1H103ZF	Ceramic 50V 0.01	1						
C4613	ECEA1CK100	Electrolytic 16V 10	1						
C4614,4615	ECKF1H103ZF	Ceramic 50V 0.01	2						
C4616	ECEA1CK100	Electrolytic 16V 10	1						
C4617	ECEA1HK010	Electrolytic 50V 1	1						
C4618	ECEA1CK100	Electrolytic 16V 10	1						
C4619	ECKF1H103ZF	Ceramic 50V 0.01	1						
C4620,4621	ECQV1H473JZ	Mylar 50V 0.047	2						
C4622,4623	ECKF1H103ZF	Ceramic 50V 0.01	2						
C4625,4626	ECQV1H473JZ	Mylar 50V 0.047	2			VEP00B01A/B/C	FM Audio Sub P.C.Board		
C4627,4628	ECKF1H103ZF	Ceramic 50V 0.01	2				Unit		
C4629	ECEA16210	Electrolytic 16V 10	1						
C4630,4631	ECKF1H103ZF	Ceramic 50V 0.01	2						
C4632	ECEA1CK100	Electrolytic 16V 10	1				Integrated Circuits		
C4633	ECEA502R22	Electrolytic 50V 0.22	1		IC4301	TC9145P		1	
C4634	ECEA10Z47	Electrolytic 10V 47	1		IC4302	TA7325P		1	
C4635	ECEA16Z47	Electrolytic 16V 47	1		IC4303,4304	μPD4066BC		2	
C4637	ECQB1H103JH	Mylar 50V 0.01	1		IC4305	μPC4558C		1	
C4638	ECEA1CK100	Electrolytic 16V 10	1		IC4306	BA6138		1	
C4639	ECQB1H103JH	Mylar 50V 0.01	1		IC4307	μPC4557C		1	
C4640	ECKF1H103ZF	Ceramic 50V 0.01	1						
C4641	ECEA1HK0R1	Electrolytic 50V 0.1	1						
C4642	ECEA16210	Electrolytic 16V 10	1						
C4643,4644	ECEA1CK100	Electrolytic 16V 10	2				Transistors		
C4645,4646	ECCF1H470JC	Ceramic 50V 47P	2		Q4301,4302	2SD636		2	
C4647	ECCF1H080DC	Ceramic 50V 8P	1		Q4303,4304	2SD661		2	(S,T)
C4648	ECEA1EK4R7	Electrolytic 25V 4.7	1		Q4305	2SD655		1	(E,F)
					Q4306,4307	2SD661		2	(S,T)
					Q4308	2SD655		1	(E,F)
		Coils			Q4310,4311	2SB641		2	
L4501	VLQEL05F101K	100μH	1		Q4312	2SD636		1	
L4505-4507	VLQEL05F101K	100μH	3		Q4313	2SB641		1	
L4512	VLQEL05F101K	100μH	1		Q4314,4315	2SD655		2	(E,F)
L4513	VLQEL05F471K	470μH	1		Q4318	2SD636		1	
L4514	VLQEL05F121K	120μH	1						
L4515,4516	VLQEL05F2R2K	2.2μH	2						
		Filters					Combination Circuits		
FL4501	VLFO317		1				(Transistor & Resistor)		

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
	VJB00A53	Reel Sensor P.C. Board		
IC1501	ON2160	Photo Interrupter	1	
	VMX0645	Sensor Spacer	1	
	VJB00A54	Loading Motor Connection P.C. Board		
C1504	VCYFIC333MR	Capacitor Semiconductor 16V 0.033	1	
		Connectors		
P1512	VJP1246	6P	1	
P1513	VJP1242	2P	1	
P1514	VJP1229	2P	1	
P1515	VJP1242	2P	1	
	VJB00A55	Front Connection P.C. Board		
		Connectors		
P1508	VJP1246	6P	1	
P1509	VJP1242	2P	1	
P1510	VJP1244	4P	1	
P1511	VJP1243	3P	1	
	VJB00A56	Takeup Photo Transistor P.C. Board		
		Transistor		
Q6552	PN150NV	Photo Transistor	1	
	VM00091	Transistor Holder	1	
	VJB00A82	Front Loading Motor Connection P.C. Board		
		Capacitor		
C1503	ECKFH1H102KB	Ceramic 50V 1000P	1	
		Switches		
	VSM0046		2	Cassette Up/Down SW
	VSM0047		1	Cassette In SW

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
		Connector		
P1507	VJPI248	8P	1	
	VJB00A94	Supply Photo Transistor P.C. Board		
		Transistor		
Q1502	PN150NV	Photo Transistor	1	
		Capacitor		
C1502	ECKFIH102KB	Ceramic 50V 1000P	1	
	VM00091	Transistor Holder	1	
	VJB00A98	Rear Jack P.C. Board		
		Resistors		
R1401	ERDS2TJ560	56	1	
R1402	ERDS2TJ271	270	1	NV-850E/EG
R1402	ERDS2TJ101	100	1	NV-850B
R1403	ERDS2TJ560	56	1	
R1404	ERDS2TJ271	270	1	NV-850E/EG
R1404	ERDS2TJ101	100	1	NV-850B
R1405,1406	ERDS2TJ101	100	2	NV-850E/EG
		Capacitors		
C1401,1402	ECKFIH222KB	Ceramic 50V 2200P	2	
		Switches		
S1401	ESD14130		1	
S1402	ESD14161		1	NV-850E/EG
S1402	ESD14130		1	NV-850B
		Connectors		
P3001	VJP1242	2P	1	
P3002	VJP1243	3P	1	
P3003	VJP1244	4P	1	
P3004	VJP1243	3P	1	NV-850E/EG
P4302	VJP1244	4P	1	NV-850E/EG
P4304	VJP1246	6P	1	
P4306	VJP1243	3P	1	
P4401	VJP1243	3P	1	
	XTV3+8C	Miscellaneous Screw		3

Ref. No.	Part No.	Part Name & Description	Pos / Set	Remarks
		Fuses		
F1101	XBA2C05TROG	500mA	1	△
F1102,1103	XBA2C16TROG	1.6A	2	△
		Connectors		
P1001	VJP1231	4P	1	
P1002	VJP1230	3P	1	
P1003	VJP1141	2P	1	
P1004	VJP1231	4P	1	
P7502	VJP1234	7P	1	
		Miscellaneous		
	VJF0052	Binder	1	
	VMX0237	AC Cord Cover	1	△
	VGH0079	Power Name Plate	1	
	VJA0111	AC Cord	1	NV-850E/EG △
	VJA0112	AC Cord	1	NV-850B △
	VMP0371	Transformer Angle	1	△
	VJF0107	Bushing	1	△
	SJT777	AC Cord Clamp Pin	2	△
	TJC6320	Fuse Holder	6	△
	VQL322	Spacer	1	
	VJB00C08	IR Remote Control Transmitter P.C. Board		
		Integrated Circuit		
IC1	MN6030B		1	
		Transistor		
Q1	2SD1458		1	
		Diodes		
D1	LN66	LED	1	or SE303A
D3	MA154WK		1	
		Resistors		
R1	ERDS2TJ102	1K	1	
R2	ERDS2TJ473	47K	1	
R3	ERDS2TJ1R0	1	1	
		Capacitors		
C1	ECKF1H471KB	Ceramic 50V 470P	1	
C2	ECKF1H121KB	Ceramic 50V 120P	1	
C3	ECEA0JK101	Electrolytic 6.3V 100	1	
		Crystal Oscillator		
X1	CSB420PB1		1	or EFOK420K05F1
		Switch		
SW1	ESD14126		1	

Service Manual

Video Cassette Recorder

Panasonic **VHS** Hi-FiNV-850<sup>-E
-EG
-B</sup>

Supplement-1

Parts List



Note: Reflecting the modified specifications of the NV-850-E, EG and B, Parts list of the original Service Manual (VRD-8310-489) has been partially modified. This Service Manual as the revised edition contains the latest parts list prepared as of December 20th, 1983. (Therefore, kindly cancel the former parts list and replace this as a revision or file with original.)

SPECIFICATIONS

Power Source: 220 V AC 50/60 Hz (NV-850-E/-EG)
240 V AC 50/60 Hz (NV-850-B)

Power Consumption: Approx. 38 watts

Television System: CCIR: 625 lines, 50 fields
PAL colour signal

Video Recording

System: 2 rotary heads, helical scanning system

Luminance: FM azimuth recording

Colour signal: converted subcarrier phase shift recording

Audio Track: 1 track (Normal), Hi-Fi 2 CH

Tape Format: Tape width 12.7mm high density tape

Tape Speed: 23.39mm/s

Record/Play back Time: 240min. with NV-E240

FF/REW Time: Less than 5.5min. with NV-E180

Heads:

Video: 3 rotary heads

1 pair for video normal recording and playback (R-L Head)

1 pc. of head for video trick play with L head (field still)

Audio: 1 pair for audio Hi-Fi recording and playback (AR-AL Head)

Audio/Control: 1 stationary head

Erase: 1 full track erase

Input Level:

Video: VIDEO IN connector (BNC)
1.0Vp-p, 75 Ω terminated
AV jack (DIN 45482:
NV-850-E/-EG) 1.0Vp-p,
75 Ω terminated

Audio: LINE IN jack (Phono jack) $\times$ 2
More than -20dB, 50k Ω

AV jack (DIN 45482:
NV-850-E/-EG) More than
-10dB, 10k Ω MIC (M6) -70dB,
More than 3.9k Ω

TV Tuners: VHF CH2 ~ CH12 (NV-850-E/-EG)
UHF CH21 ~ CH69

Output Level:

Video: VIDEO OUT connector (BNC)
1.0Vp-p, 75 Ω terminated
AV jack (DIN 45482:
NV-850-E/-EG) 1.0Vp-p,
75 Ω terminated

Audio: LINE OUT jack (Phono jack)
-8dB, less than 1k Ω
AV jack (DIN 45482:
NV-850-E/-EG) -8dB, less than
1k Ω HEADPHONE jack
-34dBV max, 8 Ω

RF Modulated: UHF CH36 $\pm$ 4
73 $\pm$ 3dB μ 75 Ω unbalanced

Weight: 9.6kg
Dimensions: 430(W) $\times$ 115(H) $\times$ 370(D)mm

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

Panasonic

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

Note that, those parts indicated as “*” have been changed from the parts shown in the Remarks.

1. MECHANICAL SECTION

Notes: 1. * Be sure to make your orders of replacement parts according to the
2. IMPORTANT SAFETY NOTICE

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
59(2)	VXZ0166	S Soft Brake Arm Unit	1	
60(2)	VXL1169	Select Lever (A) Unit	1	
61(2)	VMB1197	Select Lever Spring	1	
62(2)	VML1533	Select Lever (B)	1	
63(2)	VMS2504	Select Lever Shaft	1	
64(2)	VXP0521	Idler Arm Unit	1	
65(2)	VXA1968	Center Base Plate	1	
66(2)	VES0243	Safety Switch Unit	1	
67(2)	VEK2054	Dew Sensor Unit	1	
68(2)	VJF0004	Wire Saddle	1	
69(2)	VXA1970	Opener Angle Unit	1	
70(2)	VDG0147	Clutch Gear	1	
71(2)	VXP0523	Clutch Gear Unit	1	
72(2)	VDP0951	Clutch Pulley	1	
73(2)	VDG0155	Intermediate Gear (B)	1	
74(2)	VMB1195	Intermediate Gear Lift Spring	1	
75(2)	VDG0156	Intermediate Gear (A)	1	
76(3)	VEM0200	Loading Motor	1	△
77(3)	VMA6360	Loading Motor Bracket	1	
78(3)	VMX0251	Oil Seal	1	
79(3)	VMD0104	Oil Pool	1	
80(3)	VXD0087	Housing Unit	1	
81(3)	VDG0146	Intermediate Gear	1	
82(3)	VDG0151	Kick Gear	1	
83(3)	VXA1972	Kick Base (1) Unit	1	
84(3)	VDG0154	Select Gear	1	
85(3)	VXL1167	Select Gear Lever (1) Unit	1	
86(3)	VXL1168	Sector Gear Unit	1	
87(3)	VDG0145	Intermediate Gear	1	
88(3)	VDG0141	Cam Gear	1	
89(3)	VDG0143	Drive Gear (2)	1	
90(3)	VDG0142	Intermediate Pulley Gear	1	
91(3)	VDV0148	Loading Belt	1	
92(3)	* VSS0091	Mode Select Switch Unit	1	VES0246
93(3)	VMX0265	Thrust Washer	1	
94(3)	VXP0525	Capstan Rotor Unit	1	
95(3)	VEK2129	Capstan Stator Unit	1	△
96(3)	VXP0533	Capstan Pulley Unit	1	
97(3)	VDV0149	Capstan Belt	1	
98(3)	VXZ0168	Capstan Soft Brake Unit	1	
99(3)	VMB1204	Capstan Soft Brake Spring	1	
100(3)	VXA1996	Thrust Support Plate	1	
102(3)	VMX0396	Thrust Screw	1	
103(3)	VEH0213	FG Head Unit	1	
104(3)	VMX0308	Slide Washer	3	
105(3)	VMX0122	Slide Washer	3	
106(3)	VXL1158	Main Lever Unit	1	
107(3)	VMB1185	Kick Lever Spring	1	
108(3)	VMX0672	Cut Washer	1	
109(3)	VMX0644	Washer	1	
110(3)	VMB1184	Clutch Spring	1	
111(3)	VDG0153	Clutch Gear (1)	1	
112(3)	VDG0152	Clutch Gear (2)	1	
113(3)	VXL1165	Arm Lever (1) Unit	1	
114(3)	VMB1183	Sub Lever Spring	1	
115(3)	VXL1160	Sub Lever (1) Unit	1	
116(3)	VMB1192	Select Gear Lever Spring	1	
117(4)	VMA6354	Top Plate	1	
118(4)	VSM0047	Cassette In Detect Switch	1	
119(4)	VMD0580	Remains Display Board (L)	1	
120(4)	VMD0581	Remains Display Board (R)	1	
121(4)	VMB1089	Wiper Spring (L)	1	

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
122(4)	VDG0160	Wiper Gear (L)	1		175(5)	VJF0004	Wire Saddle	1	
123(4)	VML1436	Wiper Arm	1		176(5)	VJF0122	Wire Saddle	1	
124(4)	VMS2305	Slider Roller Pin	2		177(5)	VJF0022	Wire Saddle	1	
125(4)	VDP0839	Guide Roller	2						
126(4)	* VXA1984	Side Plate (L)(1) Unit	1	VXA1980	178(5)	VHD0117	Screw	4	NV-850E(Silver)/ EG(Silver)
127(4)	VMS2468	Slide Roller Pin (2)	2		178(5)	VHD0143	Screw	4	NV-850E(Black)/ EG(Black)/B
128(4)	VDG0120	Intermediate Gear	2		179(5)	VEJ0295	Rear Jack Unit	1	NV-850E/EG
129(4)	VDG0157	Shaft Gear	2		179(5)	VEJ0313	Rear Jack Unit	1	NV-850B
130(4)	VML1546	Front Opener Link	1						
131(4)	VMD0091	Transistor Holder	2		181(5)	VJF0031	Wire Saddle	1	
132(4)	VDP0903	Wiper Roller	2		182(5)	VMP0371	Power Transformer Angle	1	△
133(4)	VDP0902	Cassette Holder Roller	2		183(5)	VMT0085	Rubber Cushion	2	
134(4)	VMD0452	Cassette Guide	1		184(5)	VMA6386	Earth Angle	1	
135(4)	VMD0448	Slider (L)	1		185(3,5)	VJR3	Clamper	3	
136(4)	VMD0453	Safety Tab	1		186(5)	VGH0079	Power Name Plate	1	
137(4)	VMD0577	Front Guide (L)	1		187(5)	VJA0111	AC Cord	1	NV-850E/EG △
138(4)	VMB1091	Safety Spring	1		187(5)	VJA0112	AC Cord	1	NV-850B △
139(4)	VMD0454	Spring Holder	1		188(5)	VJF0107	AC Cord Bushing	1	△
140(4)	VMD0450	Slider (R)	1		189(5)	VJF0139	AC Cord Clamper	1	
141(4)	VMD0576	Front Guide (R)	1					1	
142(4)	* VXA1985	Side Plate (R)(1) Unit	1	VXA1981				1	
143(4)	VMS2499	Main Shaft	1		193(5)	VKC0102	Hinge (B)	1	
144(4)	VKF0334	Blinder Panel	1	NV-850E(Black)/ EG(Black)/B	194(5)	VKC0107	Hinge (C)	1	
144(4)	VKF0335	Blinder Panel	1	NV-850E(Silver)/ EG(Silver)	195(5)	VGU1027	VR Knob	3	
145(4)	VMB1171	Blinder Panel Spring	1		196(5)	VMP0403	Top Case Support Angle (B)	1	
146(4)	VMD0455	F. Loading Motor Bracket	1		197(5)	VHD0059	Screw	9	
147(4)	VDV0074	Loading Belt	1		198(5)	VKU0205	Bottom Plate	1	
148(4)	VXA1754	Worm Shaft Pulley Unit	1		200(5)	VGU1128	Function Select Button	1	
149(4)	VDB0660	Worm Shaft Holder	1		201(5)	VYP0898	Front Panel Unit	1	NV-850E(Silver)
150(4)	VML1436	Wiper Arm	1		201(5)	VYP0957	Front Panel Unit	1	NV-850B
151(4)	VDG0116	Wiper Gear (R)	1		201(5)	VYP0904	Front Panel Unit	1	NV-850E(Black)
152(4)	* VMB1090	Wiper Spring (R)	1	VMP1090	201(5)	VYP0906	Front Panel Unit	1	NV-850E(Silver)
153(4)	VMD0456	Stopper Ring	1		201(5)	VYP0907	Front Panel Unit	1	NV-850E(Black)
154(4)	VDG0118	Clutch Gear	1		202(5)	VGU1088	Memory/Reset Button	2	
155(4)	VMX0531	Clutch Spacer	1		203(5)	VGQ0578	Cushion	1	
156(4)	VDG0117	Worm Wheel	1		204(5)	VGU1073	Audio Dub/Rec mute Button	2	
157(4)	VMB1093	Clutch Spring	1		205(5)	VGU1074	Multiplex Button	4	
158(4)	VMX0530	Clutch Washer	1		206(5)	VMB1043	Button Spring (A)	4	
159(4)	VMA6340	Switch Bracket	1		207(5)	VGU0595	Timer Rec Button	1	
160(4)	VSM0046	Skeleton Switch	2		208(5)	VMB1086	Button Spring (B)	1	
161(5)	VSC1046	Shield Case	1		209(5)	VKC0111	Latch	1	
162(5)	VJH0287	RF & ANT Board	1		210(5)	VYF0315	Timer Door Unit	1	NV-850E(Silver)/ EG(Silver)
163(5)	VMA6381	RF & ANT Unit Mount Angle	1		210(5)	VYF0317	Timer Door Unit	1	NV-850E(Black)/ EG(Black)/B
164(5)	VXA1987	Cassette Comp. Angle (L)	1		211(5)	VGQ0580	Hinge (L)	1	NV-850E(Silver)/ EG(Silver)
165(5)	VXA1988	Cassette Comp. Angle (R)	1		211(5)	VGQ0593	Hinge (R)	1	NV-850E(Black)/ EG(Black)/B
167(5)	VGQ0558	Tuner Holder	1	NV-850E/B	212(5)	VGQ0579	Hinge (R)	1	NV-850E(Silver)/ EG(Silver)
168(5)	VMP0370	Top Case Support Angle (A)	3		212(5)	VGQ0592	Hinge (R)	1	NV-850E(Black)/ EG(Black)/B
169(5)	VKC0055	Hinge (A)	2		213(5)	VGQ0415	Preset VR Case	1	
170(5)	VKA0026	Rubber Foot	4		214(5)	VGN1993	Preset VR Plate	1	NV-850E/EG
171(5)	VYP0901	Top Panel Unit	1	NV-850E(Silver)/ EG(Silver)	214(5)	VGN2054	Preset VR Plate	1	NV-850B
171(5)	VYP0905	Top Panel Unit	1	NV-850E(Black)/ EG(Black)/B	215(6)	VSQ0327	Remote Control Unit	1	NV-850E(Silver)/ EG(Silver)
171(5)	VYP0884	Top Panel Unit	1		215(6)	VSQ0338	Remote Control Unit	1	NV-850E(Black)/ EG(Black)/B
172(5)	* ———	Characteristic Sticker	1	VQL2266 (Not available)	216(6)	VQF1157	Fan Bag Kit	1	NV-850E(Silver) △
172(5)	* ———	Characteristic Sticker	1	VQL2242 (Not available)	216(6)	VQF1160	Fan Bag Kit	1	NV-850E(Black) △
173(5)	VW0280	Top Smoke Board	1						
174(5)	VYF0313	Preset Cover Unit	1	NV-850E(Silver)/ EG(Silver)					
174(5)	VYF0318	Preset Cover Unit	1	NV-850E(Black)/ EG(Black)					
174(5)	VYF0353	Preset Cover Unit	1	NV-850B					

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
216(6)	VQF1159	Fan Bag Kit	1	NV-850EG(Black)▲	265(7)	VGU1288	Play Button	1	NV-850E(Black)/
216(6)	VQF1158	Fan Bag Kit	1	NV-850B▲					EG(Black)/B
216(6)	VQF1197	Fan Bag Kit	1	NV-850EG(Silver)▲	266(7)	VGU1205	Stop Button	1	NV-850E(Silver)/
217(6)	VPN0958	Cushion (L)	1						EG(Silver)
218(6)	VPN0957	Cushion (R)	1		266(7)	VGU1289	Stop Button	1	NV-850E(Black)/
219(6)	VPF0144	Polyethylene Bag	1						EG(Black)/B
220(6)	VPG1572	Packing Case	1	NV-850E(Silver)	267(7)	VGU1209	FF Button	1	NV-850E(Silver)/
220(6)	VPG1571	Packing Case	1	NV-850E(Black)					EG(Silver)
220(6)	VPG1619	Packing Case	1	NV-850EG(Silver)	267(7)	VGU1293	FF Button	1	NV-850E(Black)/
220(6)	VPG1574	Packing Case	1	NV-850EG(Black)					EG(Black)/B
220(6)	VPG1573	Packing Case	1	NV-850B	268(7)	VGU1208	Rew Button	1	NV-850E(Silver)/
221(6)	VJA0231	Audio Cable	2						EG(Silver)
222(6)	VJA0130	DIN RF Cable	1		268(7)	VGU1292	Rew Button	1	NV-850E(Black)/
									EG(Black)/B
					269(7)	VGU1207	F. Adv Button	1	NV-850E(Silver)/
									EG(Silver)
					269(7)	VGU1291	F. Adv Button	1	NV-850E(Black)/
									EG(Black)/B
					270(7)	VGU1206	Still Button	1	NV-850E(Silver)/
									EG(Silver)
					270(7)	VGU1290	Still Button	1	NV-850E(Black)/
									EG(Black)/B
					272(7)	VGU2212	Rec Button A (Red)	1	
					273(7)	VGU2211	CH Select & Rec B Button	1	NV-850E(Silver)/
									EG(Silver)
					273(7)	VGU1335	CH Select & Rec B Button	1	NV-850E(Black)/
									EG(Black)/B
					274(7)	* VGU1213	Power Button	1	VGU2213
					275(7)	* VGQ0601	Button Holder	1	VGU0656
					276(7)	VGU1210	VTR Button	1	NV-850E(Silver)/
									EG(Silver)
229(4)	VGQ0571	Spacer	2		276(7)	VGU1294	VTR Button	1	NV-850E(Black)/
230(5)	VKC0076	Hinge(D)	2						EG(Black)/B
231(1)	VMD0369	Wire Holder	1		277(7)	VSP0150	Rubber Contact	1	
232(4)	VXA2054	Cassette Holder (1) Unit	1		278(7)	VKF0340	Battery Cover	1	
233(3)	VMT0101	Stopper Cushion	1		279(7)	VKW0297	Smoke Board	1	
234(3)	VMD0146	Screw	1		280(7)	VYK0656	Bottom Case Unit	1	NV-850E(Silver)/
235(5)	VMP0419	Decoder P.C.B. Angle	1						EG(Silver)
236(1)	VXA2006	Stator Angle Unit	1		280(7)	VYK0658	Bottom Case Unit	1	NV-850E(Black)/
237(1)	VXA2004	RT Rotor Base Unit	1						EG(Black)/B
239(5)	VKC0083	Hinge (E)	1		281(7)	* XTN2+5B	Screw	1	XTB2+5G
240(4)	MXN12AE10C	Front Loading Motor	1	▲					
241(5)	VMG0272	RF Converter Bushing	1						
242(5)	VMX0573	Spacer	8						
243(5)	VMX0237	AC Cord Cover	1	▲					
244(5)	VMZ0562	Barrier	1	▲					
245(5)	VSC1064	Power Heat Sink	1						
246(5)	VMB0758	Tr. Clamper	1						
247(5)	VKC0109	Hinge (F)	2						
248(5)	VJF0175	P.C. Board Supporter	1						
249(5)	VKC0068	Hinge (G)	2						
250(5)	VJF0108	Rivet	2						
251(5)	VXA2062	Barrier	1						
252(5)	VTP0105	Power Transformer	1	NV-850E/EG▲	401(1)	* XSN3+8BNS,XWG3BW		2	XYNV3+B8BNS
252(5)	VTP0104	Power Transformer	1	NV-850B▲	402(1)	* XTN26+6B		1	XTN26+6G
261(7)	VYK0655	Top Case Unit	1	NV-850E(Silver)/	403(1)	* XYE3+BF15FZ		4	
				EG(Silver)	404(1)	* XSN3+8BVS,XWGV3FZ,XWA4BFZ		2	XYN3+F8FZS
261(7)	VYK0657	Top Case Unit	1	NV-850E(Black)/	405(1,2,3,4,5)	XTV3+8F		23	
				EG(Black)/B	406(1)	XSS26+6		1	
262(7)	VJR0101	Electrode (Common)	1		407(1,3,4,5)	XTV3+6F		7	
263(7)	VJR0100	Electrode (-)	1		408(1)	* XSN3+6BVS,XWG4FZ,XWA4BFZ		1	XYN3+F6FZS
264(7)	VJR0099	Electrode (+)	1		409(1,4)	* XSN3+4,XWA3B		3	XYN3+C4S
265(7)	VGU1204	Play Button	1	NV-850E(Silver)/	410(1)	* XSN3+10BVS		1	XSN3D10FZS
				EG(Silver)	411(1,3)	* XTV3+8BFZ		3	XTV3+8FFZ
					412(1)	* XSN3+8,XWA3B		3	XYN3+C8S
					413(2,4)	XYE3+EF8		1	
					414(2)	XYE3+BF9FZ		2	
					416(3)	XYE3+BF8FZ		1	
					417(4)	* XTV3+8BPN		4	XTS3+8F
					418(4)	XTB3+8CK		4	
					419(4)	XTB3+8FK		6	
					420(4)	* XYE3+EF6		1	XYE3+FE6
					421(4)	XYN2+F10		2	

2. ELECTRICAL SECTION

Notes: 1. * Be sure to make your orders of replacement parts according to this list.
 2. IMPORTANT SAFETY NOTICE
 Components identified by Δ have special characteristics important for safety. When replacing any of these components, use only the original ones.
 3. Unless otherwise specified.
 All resistors are in OHMS (Ω), 1/4W $\pm 5\%$ carbon. K=1,000 Ω , M=1,000 K Ω . All capacitors are in MICROFARADS (μ F), $\pm 10\%$ P= μ F.

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
	VEP03197A	Main [Power Supply, Servo, Luminance (1), Chrominance, Audio & System Control] P.C. Board Unit	1	NV-850EG Δ
	VEP03197B	Main [Power Supply, Servo, Luminance (1), Chrominance, Audio & System Control] P.C. Board Unit	1	NV-850B Δ
	VEP03197C	Main [Power Supply, Servo, Luminance (1), Chrominance, Audio & System Control] P.C. Board Unit	1	NV-850E Δ
	VEP05053A	Head Amp & Luminance (2) P.C. Board Unit	1	
	VEP06212A	Operation P.C. Board Unit	1	
	VEP07186G	TV Demodulator P.C. Board Unit	1	NV-850E Δ
	VEP07186H	TV Demodulator P.C. Board Unit	1	NV-850B Δ
	VEP07193A	TV Demodulator P.C. Board Unit	1	NV-850EG Δ
	VEP07194A	Decoder P.C. Board Unit	1	NV-850EG
	VEP07195A	Timer P.C. Board Unit	1	NV-850E/EG
	VEP07195B	Timer P.C. Board Unit	1	NV-850B
	VEP07196A	Timer Operation P.C. Board Unit	1	NV-850E/EG
	VEP07196B	Timer Operation P.C. Board Unit	1	NV-850B
	VEP00A99A	FM Audio Main P.C. Board Unit	1	
	VEP00B01A	FM Audio Sub P.C. Board Unit	1	NV-850EG
	VEP00B01B	FM Audio Sub P.C. Board Unit	1	NV-850B
	VEP00B01C	FM Audio Sub P.C. Board Unit	1	NV-850E
	ENC87751	RF Converter Unit	1	NV-850E/EG Δ
	ENC87752	RF Converter Unit	1	NV-850B Δ

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
	VJB00A53	Reel Sensor P.C. Board	1	
	VJB00A54	Loading Motor Connection P.C. Board	1	
	VJB00A55	Front Connection P.C. Board	1	
	VJB00A56	Takeup Photo Transistor P.C. Board	1	
	VJB00A82	F. Loading Motor Connection P.C. Board	1	
	VJB00A94	Supply Photo Transistor P.C. Board	1	
	VJB00A98	Rear Jack P.C. Board	1	
	VJB00B45	Heater Transformer P.C. Board	1	
	VJB00B46	Power Transistor P.C. Board	1	
	VJB00B47	Head Phone P.C. Board	1	
	VJB00B64	IR Remote Control Receiver P.C. Board	1	
	VJB00B78	Cylinder Heater P.C. Board	1	
	VJB00976	Sensor LED P.C. Board	1	
	VJB01137	Power Transformer P.C. Board	1	Δ
	* VEP00C08	IR Remote Control Transmitter P.C. Board	1	VJB00C08
	VTP0105	Power Transformer	1	NV-850E/EG Δ
	VTP0104	Power Transformer	1	NV-850B Δ
	VMZ0562	Barrier	1	Δ
	XIV4+8F	Screw	1	
	VJF0052	Binder	5	
	VJF0055	Binder	6	

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
	VEP03197A/ B/C	Main[Power Supply,Servo, Luminance (I), Chrominance, Audio & System Control]P.C.Board Unit		
		(Power Supply Section)		
		Transistors		
Q1001	2SD636		1	(Q,R,S,T) or 2SC2021M (Q,R,S,E)
Q1003	2SD636		1	(Q,R,S,T) or 2SC2021M (Q,R,S,E)
Q1102	2SD1265		1	△
		Diodes		
D1002	RD3.9EB1	Zener	1	
D1003,1004	MA165		2	
D1110	RD13EB3	Zener	1	
		Resistors		
R1001	ERQ14IKR39	Metal	0.39	1 △
R1002	ERDS2TJ471		470	1
R1003	EVN38CA00B53	Variable	5K	1
R1004	ERDS2TJ392		3.9K	1
R1005	EROS2CKG3901	Metal	3.9K	1
R1006	EROS2CKG3001	Metal	3K	1
R1007	ERDS2TJ103		10K	1
R1008	ERDS2TJ682		6.8K	1
R1009	ERDS2TJ472		4.7K	1
R1010	EROS2CKG1800	Metal	180	1
R1102	ERDS2TJ152		1.5K	1
		Capacitors		
C1002	ECEA0JK470	Electrolytic	6.3V 47	1 or ECEAlHS470
C1003	ECEA1HU470	Electrolytic	50V 47	1
C1104	ECEA1CK470	Electrolytic	16V 47	1
C1004	ECEA0JU470	Electrolytic	6.3V 47	1
		(Servo Section)		
		Integrated Circuits		
IC2001	AN6359N			1
IC2002	MN6168VIP			1
IC2003	AN6356N			1
IC2004	AN3822			1
IC2005	AN6387			1
IC2007	BA855			1
IC2008	AN6342N			1
IC2009	BA6323L			1
IC2010	μPC358C			1

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
		Transistors		
Q2001,2002	2SD636		2	(P,Q,R,S,T) or 2SC2021M(Q,R,S,E)
Q2003	2SB641		1	(P,Q,R,S) or 2SA937M(Q,R,S)
Q2004	2SD636		1	(P,Q,R,S,T) or 2SC2021M (Q,R,S,E)
Q2005	2SB641		1	(P,Q,R,S) or 2SA937M (Q,R,S)
Q2006	2SD636		1	(P,Q,R,S,T) or 2SC2021M(Q,R,S,E)
		Combination Parts (Transistor & Resistor)		
QR2001-2003	DTC144A		3	or UN1213
QR2004	DTA144A		1	or UN1113
QR2006,2007	DTC144A		2	or UN1213
QR2008,2009	DTA144A		2	or UN1113
QR2010	DTC144A		1	or UN1213
		Diodes		
D2001,2002	MA165		2	
D2003	10E1		1	or ER1201G1
D2004	MA154WK		1	
D2005-2007	MA165		3	
D2009-2014	MA165		6	
		Resistors		
R2001	ERDS2TJ223		22K	1
R2002	ERDS2TJ272		2.7K	1
R2003	ERDS2TJ472		4.7K	1
R2004	ERDS2TJ154		150K	1
R2005	ERDS2TJ333		33K	1
R2006	ERDS2TJ154		150K	1
R2007	ERDS2TJ332		3.3K	1
R2008	ERDS2TJ124		120K	1
R2009	ERDS2TJ154		150K	1
R2010	ERDS2TJ563		56K	1
R2011	ERDS2TJ103		10K	1
R2012	ERDS2TJ274		270K	1
R2013	ERDS2TJ682		6.8K	1
R2014	ERDS2TJ222		2.2K	1
R2015	EVJ1EAF20B15	Variable	100K	1
R2016	EVN61AA00B15	Variable	100K	1
R2017	ERDS2TJ102		1K	1
R2018	EVN61AA00B54	Variable	50K	1
R2019	ERDS2TJ153		15K	1
R2020	ERDS2TJ223		22K	1
R2021	ERDS2TJ391		390	1
R2022	ERDS2TJ563		56K	1
R2023	ERDS2TJ473		47K	1
R2024,2025	ERDS2TJ223		22K	2
R2026	ERDS2TJ104		100K	1
R2027	ERDS2TJ393		39K	1
R2028	ERDS2TJ124		120K	1
R2029	ERDS2TJ222		2.2K	1
R2030,2031	ERDS2TJ103		10K	2
R2032	ERDS2TJ562		5.6K	1
R2033	ERDS2TJ103		10K	1

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
R2034	ERDS2TJ105	1M	1		C2014,2015	ECEA1CK100	Electrolytic 50V	10 2	
R2035	ERX12ANJR82	Metal 1/2W 0.82	1		C2016	ECEA0JK470	Electrolytic 6.3V	47 1	
R2036	ERDS2TJ102	1K	1		C2017	ECEA102.100	Electrolytic 10V	10 1	
R2037	ERDS2TJ103	10K	1		C2018	ECQVIH104JZ	Mylar 50V	0.1 1	
R2038-2040	ERDS2TJ224	220K	3		C2019	ECEA0JK101	Electrolytic 6.3V	100 1	
R2041	ERDS2TJ181	180	1		C2020	ECQVIH104JZ	Mylar 50V	0.1 1	
R2042	ERDS2TJ104	100K	1		C2021	ECEA1HK010	Electrolytic 50V	1 1	
R2043	ERDS2TJ124	120K	1		C2022-2024	ECKFIH272KB	Ceramic 50V 2700P	3	
R2044	ERX12ANJR68	Metal 1/2W 0.68	1		C2025-2027	ECEA1EK47	Electrolytic 25V	4.7 3	
R2045-2047	ERDS2TJ150	15	3		C2028	ECKFIH222KB	Ceramic 50V 2200P	1	
R2049	ERQ12HJ6R8	Metal 1/2W 6.8	1	⚠	C2029	VCYG1E682JR	Semiconductor 25V 6800P	1	
R2050	ERDS2TJ563	56K	1		C2030	ECKFIH103ZF	Ceramic 50V 0.01	1	
R2055	ERDS2TJ105	1M	1		C2031	ECEA1HKR22	Electrolytic 50V 0.22	1	
R2056	ERDS2TJ183	18K	1		C2032	VCYG1E123JR	Semiconductor 25V 0.012	1	
R2057	ERDS2TJ103	10K	1		C2033	ECEA1EK3R3	Electrolytic 25V 3.3	1	
R2058	ERDS2TJ333	33K	1		C2034	* ECEA1CK470	Electrolytic 16V	47 1	ECEA1CK470UJ
R2059	ERDS2TJ102	1K	1		C2035-2037	* ECEA1EN4R7S	Electrolytic 25V	4.7 3	ECEA1EN4R7SE
R2060	ERDS2TJ472	4.7K	1		C2038	ECEA1HKN010	Electrolytic 50V	1 1	
R2063	ERDS2TJ102	1K	1		C2039	ECKFIH152KB	Ceramic 50V 1500P	1	
R2064	ERDS2TJ184	180K	1		C2040	ECEA1HK0R1	Electrolytic 50V	0.1 1	
R2065	ERDS2TJ473	47K	1		C2041	ECQB1H222KH	Mylar 50V 2200P	1	
R2066	EVN61AA00B54	Variable 50K	1		C2042	ECKFIH103ZF	Ceramic 50V 0.01	1	
R2067	ERDS2TJ184	180K	1		C2046	ECEA1EKN2R2	Electrolytic 25V	2.2 1	
R2068	ERDS2TJ154	150K	1		C2047	ECEA1HK010	Electrolytic 50V	1 1	
R2069	ERDS2TJ683	68K	1		C2048	ECEA1CK100	Electrolytic 16V	10 1	
R2070	ERDS2TJ184	180K	1		C2049	VCYG1E103JR	Semiconductor 25V	0.01 1	
R2071	EROS2CKG5102	Metal 51K	1		C2050	VCYG1E123JR	Semiconductor 25V 0.012	1	
R2072	EVTK4CA00B15	Variable 100K	1		C2051	ECQVIH104JZ	Mylar 50V	0.1 1	
R2073	EVN3ACA00B54	Variable 50K	1		C2052	ECEA0JK470	Electrolytic 6.3V	47 1	
R2074	ERDS2TJ563	56K	1		C2053	VCYG1E682JR	Semiconductor 25V 6800P	1	
R2075	ERDS2TJ151	150	1		C2054	ECEA16Z10	Electrolytic 16V	10 1	
R2076	ERDS2TJ153	15K	1		C2055	VCYG1E103JR	Semiconductor 25V 0.01	1	
R2077	ERDS2TJ222	2.2K	1		C2056,2057	ECQVIH124JZ	Mylar 50V 0.12	2	
R2078	ERDS2TJ223	22K	1		C2058	ECQVIH154JZ	Mylar 50V 0.15	1	
R2079,2080	ERDS2TJ563	56K	2		C2059	ECQVIH124JZ	Mylar 50V 0.12	1	
R2081	ERDS2TJ273	27K	1		C2060	ECQB1H272KH	Mylar 50V 2700P	1	
R2082	ERDS2TJ223	22K	1		C2061	ECQB1H822KH	Mylar 50V 8200P	1	
R2083	EROS2CKG3002	Metal 30K	1		C2062	ECQB1H682KH	Mylar 50V 6800P	1	
R2084	ERDS2TJ102	1K	1		C2063	VCYG1E103JR	Semiconductor 25V 0.01	1	
R2085	EVN61AA00B15	Variable 100K	1		C2064	ECEA1CK100	Electrolytic 16V	10 1	
R2087	ERDS2TJ102	1K	1		C2065	VCYG1E103JR	Semiconductor 25V 0.01	1	
R2088	ERDS2TJ562	5.6K	1		C2066	ECEA1HK010	Electrolytic 50V	1 1	
R2089	ERDS2TJ472	4.7K	1		C2067	ECQB1H103KH	Mylar 50V 0.01	1	
R2090	ERDS2TJ564	560K	1		C2068	ECQVIH104JZ	Mylar 50V 0.1	1	
R2091	ERDS2TJ561	560	1		C2069,2070	ECEA0JK101	Electrolytic 6.3V	100 2	
R2092	ERDS2TJ104	100K	1		C2071	ECEA1CK470	Electrolytic 16V	47 1	
R2093	ERDS2TJ105	1M	1		C2072	ECEA0JK101	Electrolytic 6.3V	100 1	
R2094	ERDS2TJ102	1K	1		C2073	ECEA1EU470	Electrolytic 25V 47	1	or ECEA1ES470
		Capacitors					Combination Circuits (Capacitor & Resistor)		
C2001	ECQVIH104JZ	Mylar 50V 0.1	1						
C2003	VCYG1E562JR	Semiconductor 25V 5600P	1		CR2001	* EXED472M104C	4700P, 100K	1	EXED472M10 4T
C2004	ECEA1HK0R1	Electrolytic 50V 0.1	1		CR2002	* EXED223M222C	0.022, 2.2K	1	EXED223M2 2T
C2005	ECQB1H223KH	Mylar 50V 0.022	1						
C2006	ECEA0JK101	Electrolytic 6.3V 100	1						
C2007	VCYG1E562JR	Semiconductor 25V 5600P	1						
C2008	ECEA1HK0R1	Electrolytic 50V 0.1	1						
C2009	ECEA0JK330	Electrolytic 6.3V 33	1						
C2010	ECEA1HK010	Electrolytic 50V	1 1						
C2011	ECQVIH334JZ	Mylar 50V 0.33	1				(Luminance (1) Section)		
C2012	ECQVIH683JZ	Mylar 50V 0.068	1				Integrated Circuits		
C2013	ECKFIH472ZF	Ceramic 50V 4700P	1		IC3001	BA7004		1	
					IC3050	AN6328		1	
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Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
		Coils					Resistors		
L4001	VTQ0014	10mH	1		R6001	ERG1ANJ680	Metal 1W 68	1	
L4002	VLQEL05F471K	470 μ H	1		R6002	ERDS2TJ220		22	1
L4003,4004	VTQ0014	10mH	2		R6003	ERDS2TJ681		680	1
L4101	*VLQEL05F471K	470 μ H	1	VLQEL06F471K	R6004	ERDS2TJ332		3.3K	1
					R6005,6006	ERDS2TJ681		680	2
					R6007	ERDS2TJ332		3.3K	1
					R6008,6009	ERDS2TJ103		10K	2
		Transformers			R6010	ERDS2TJ152		1.5K	1
T4101	EIQ7QF002B		1	or VLT0202	R6011	ERDS2TJ102		1K	1
T4102	EIQ7QF003B		1	or VLT0201	R6012	ERDS2TJ682		6.8K	1
					R6013	ERDS2TJ563		56K	1
					R6014	ERDS2TJ222		2.2K	1
					R6015	ERDS2TJ153		15K	1
					R6016	ERDS2TJ103		10K	1
					R6017	ERDS2TJ333		33K	1
		(System Control Section)			R6019	ERDS2TJ103		10K	1
					R6021	ERDS2TJ105		1M	1
					R6022	ERDS2TJ474		470K	1
		Integrated Circuits			R6023	EROS2CKG2261	Metal	2260	1
IC6001	MN15342VGC-3		1		R6024	EROS2CKG1542	Metal	15.4K	1
IC6002,6003	BA6209		2		R6025	EROS2CKG1212	Metal	12.1K	1
IC6004	AN6914		1		R6026	ERDS2TJ103		10K	1
					R6027	ERDS2TJ562		5.6K	1
					R6028	ERDS2TJ682		6.8K	1
					R6029	ERDS2TJ103		10K	1
		Transistors			R6030	ERDS2TJ152		1.5K	1
Q6001,6002	2SD636		2	(P,Q,R,S,T) or 2SC2021M(Q,R,S,E)	R6033	ERDS2TJ682		6.8K	1
Q6003	2SB819		1	(R,S)	R6034	ERDS2TJ562		5.6K	1
Q6005	2SA719		1	(R,S)	R6035	ERDS2TJ332		3.3K	1
Q6006	2SB641		1	(P,Q,R,S) or 2SA937M (Q,R,S)	R6036	ERDS2TJ682		6.8K	1
					R6037	ERDS2TJ562		5.6K	1
					R6038,6039	ERDS2TJ103		10K	2
Q6007	2SA719		1	(P,Q,R,S)	R6040,6041	ERDS2TJ105		1M	2
Q6008	2SB641		1	(P,Q,R,S) or 2SA937M(Q,R,S)	R6043	ERDS2TJ332		3.3K	1
Q6009	2SA719		1	(P,Q,R,S)	R6047	ERDS2TJ333		33K	1
Q6012	2SD636		1	(P,Q,R,S,T)	R6048	ERDS2TJ560		56	1
					R6050	ERDS2TJ391		390	1
					R6051	ERDS2TJ333		33K	1
					R6052	ERDS2TJ223		22K	1
					R6053	ERDS2TJ182		1.8K	1
		Combination Circuits (Transistor & Resistor)			R6054	ERDS2TJ223		22K	1
QR6001	DTC124A		1	or UN1212	R6055	ERDS2TJ822		8.2K	1
QR6002,6003	DTC114A		2	or UN1211	R6056-6059	ERDS2TJ223		22K	4
QR6004	DTC114A		1	or UN1211	R6068,6069	ERDS2TJ223		22K	2
QR6005,6006*	DTA124A		2	or UN1112 DTC124A	R6070	ERDS2TJ562		5.6K	1
QR6008	DTA124A		1	or UN1112	R6077	FRDS2TJ682		6.8K	1
QR6012,6013	DTC144A		2	or UN1213	R6078	FRDS2TJ333		33K	1
					R6081	ERDS2TJ123		12K	1
					R6082	ERDS2TJ473		47K	1
					R6083	ERDS2TJ222		2.2K	1
		Diodes			R6085	ERDS2TJ683		68K	1
D6005	MA165		1		R6086	ERDS2TJ332		3.3K	1
D6007,6008	MA165		2						
D6011-6016	MA165		6						
D6022	MA165		1				Capacitors		
D6024	MA165		1		C6001	ECQB1H472KH	Mylar 50V 4700P	1	
D6029,6030	MA165		2		C6002	ECKFIH681KB	Ceramic 50V 680P	1	
D6039	MA165		1		C6003,6004	ECKFIH103ZF	Ceramic 50V 0.01	2	
D6043	MA154WK		1		C6005	ECEA0JK101	Electrolytic 6.3V 100	1	
D6055-6057	MA165		3		C6006	ECKFIH221KB	Ceramic 50V 220P	1	
D6058,6059	MA165		2	NV-850E/EG	C6007	ECEA1HK0R1	Electrolytic 50V 0.1	1	
D6060,6061	MA165		2		C6008	ECKFIH103ZF	Ceramic 50V 0.01	1	
					C6009	ECEA0JK470	Electrolytic 6.3V 47	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks	Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
C8023		ECEA0JK470	Electrolytic 6.3V 47	1	NV-850EG			VEP05053A	Head Amp & Luminance (2)		
C8024		ECEAI CK100	Electrolytic 16V 10	1					P.C. Board Unit		
C8025		ECQVIH104JZ	Mylar 50V 0.1	1							
C8026		ECKFIH103ZF	Ceramic 50V 0.01	1							
C8027		ECCFIH050CC	Ceramic 50V 5P	1					P.C.B. Ass'y		
C8028,8029	*	VCYG1C104MR	Semiconductor 16V 0.1	2	VCYG1C104MR1	IC3501		VEFY005		1	
C8030	*	VCYG1C104MR	Semiconductor 16V 0.1	1	NV-850EG VCYG1C104MR1						
C8031		ECKFIH471KB	Ceramic 50V 470P	1							
C8032		ECKFIH821KB	Ceramic 50V 820P	1							
C8033		ECQVIH154JZ	Mylar 50V 0.15	1					Integrated Circuit		
C8034		EQQB1H103KH	Mylar 50V 0.01	1		IC3502		AN6326N		1	
			Coils								
L8001		VLQEL05F270K	27 μ H	1							
L8002		VLQEL05F470K	47 μ H	1					Transistors		
L8003		VLQEL05F331K	330 μ H	1		Q3501		2SC2377		1	(C,D)
L8004		VLQEL05F681K	680 μ H	1		Q3502,3503		2SC2206		2	(A,B,C)
L8005		VLQEL05F101K	100 μ H	1		Q3504		2SB641		1	(P,Q,R,S,T)
L8006		VLQEL05F681K	680 μ H	1							or 2SA937M(Q,R,S)
L8008		VLQEL05F150K	15 μ H	1		Q3505-3508		2SC2206		4	(A,B,C)
L8009		ELM7Q207A		1	NV-850EG	Q3509		2SD636		1	(P,Q,R,S,T)
L8010		VLQEL05F101K	100 μ H	1	NV-850EG						or 2SC2021M(Q,R,S,E)
L8011		VLQEL05F151K	150 μ H	1		Q3550		2SD661		1	
L8012		VLQEL05F470K	47 μ H	1		Q3551,3552		2SC2377		2	(C,D)
L8013		VLQEL05F681K	680 μ H	1		Q3562		2SC2206		1	(A,B,C)
			Combination Circuits (Capacitor & Resistor)						Diodes		
CR8001		EXEP820K332C	82P, 3.3K	1		D3501		MA165		1	
CR8002		EXED103M821C	0.01,820	1		D3502		RD3.3EB	Zener	1	
						D3550,3551		MA165		2	
									Resistors		
						R3501		ERDS2TJ102		1K	1
						R3502		ERDS2TJ152		1.5K	1
						R3503		ERDS2TJ471		470	1
						R3504		ERDS2TJ681		680	1
						R3505		ERDS2TJ122		1.2K	1
DL8001		EFDBR124A13B		1		R3508		ERDS2TJ102		1K	1
						R3509		ERDS2TJ154		150K	1
						R3510		ERDS2TJ152		1.5K	1
						R3511		ERDS2TJ392		3.9K	1
FL8001		VLFO299		1		R3512		ERDS2TJ331		330	1
FL8002		VLFO143		1	NV-850EG	R3513		ERDS2TJ104		100K	1
						R3514		ERDS2TJ472		4.7K	1
						R3515		EROS2CKG1601	Metal	1.6K	1
						R3516		ERDS2TJ222		2.2K	1
						R3517		ERDS2TJ104		100K	1
						R3518		ERDS2TJ122		1.2K	1
						R3519		ERDS2TJ123		12K	1
						R3521		EVN61AA00B13	Variable	1K	1
						R3522		ERDS2TJ471		470	1
						R3523		EROS2CKG4700	Metal	470	1
JSA,JSB, JSC,JSD		VJS1180	5P	4		R3524		ERDS2TJ682		6.8K	1
						R3525		ERDS2TJ122		1.2K	1
						R3526		EROS2CKG1201	Metal	1.2K	1
						R3527		EROS2CKG2200	Metal	220	1
						R3528		ERDS2TJ100		10	1
						R3529		ERDS2TJ682		6.8K	1
						R3530,3531		ERDS2TJ560		56	2
		VGU1027	VR Knob	3		R3532		ERDS2TJ100		10	1
		VJF0022	Wire Saddle (Large)	1		R3533		ERDS2TJ122		1.2K	1
		VJF0052	Binder	4		R3534		ERDS2TJ820		82	1
		VJJ0106	Mic Jack	1		R3535		ERDS2TJ124		120K	1

[illegible]

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
		Connector					Resistors		
P3501	VJP1229		2P 1		R6501	ERDS2TJ391	390	1	
					R6502	ERDS2TJ301	300	1	
					R6503	ERDS2TJ681	680	1	
					R6504	ERDS2TJ122	1.2K	1	
					R6505	ERDS2TJ272	2.7K	1	
		Miscellaneous			R6506	ERDS2TJ472	4.7K	1	
	VGQ0474	Spacer	1		R6507	ERDS2TJ822	8.2K	1	
	VJF0035	Wire Saddle	1		R6508	ERDS2TJ183	18K	1	
	VSC1058	Shield Case (Top)	1		R6510	ERDS2TJ333	33K	1	
	VSC1059	Shield Case (Middle)	1		R6511	ERDS2TJ623	62K	1	
	VSC1060	Shield Case (Bottom)	1		R6512	ERDS2TJ152	1.5K	1	
					R6515	EVN3ACA00B14	Variable	10K	1
					R6516	ERDS2TJ103	10K	1	
					R6517	ERDS2TJ563	56K	1	
					R6518	ERDS2TJ560	56	1	
					R6519	ERDS2TJ104	100K	1	
					R6520,6521	ERDS2TJ330	33	2	
					R6522	ERDS2TJ223	22K	1	
					R6523	ERDS2TJ103	10K	1	
					R6524	ERDS2TJ223	22K	1	
					R6527	ERDS2TJ223	22K	1	
					R6528	ERDS2TJ473	47K	1	
					R6529	ERDS2TJ223	22K	1	
					R6530,6531	ERDS2TJ473	47K	2	
					R6532	ERDS2TJ223	22K	1	
					R6533	ERDS2TJ561	560	1	
					R6534	ERDS2TJ394	390K	1	
					R6536	ERDS2TJ683	68K	1	
					R6537	ERDS2TJ561	560	1	
					R6538	ERDS2TJ394	390K	1	
					R6539	ERDS2TJ822	8.2K	1	
					R6540	ERDS2TJ273	27K	1	
	VEP06212A	Operation P.C. Board Unit			R6541	ERDS2TJ822	8.2K	1	
					R6542	ERDS2TJ273	27K	1	
					R6546	ERDS2TJ562	5.6K	1	
		Integrated Circuits			R6547	ERDS2TJ104	100K	1	
IC6501	MN1450BVG		1		R6548	ERDS2TJ103	10K	1	
IC6502,6503	BA668A		2		R6549,6550	ERDS2TJ471	470	2	
					R6551	ERDS2TJ152	1.5K	1	
		Transistors					Capacitors		
Q6501	2SB642		1		C6501	ECEA1HK010	Electrolytic 50V	1	1
Q6502-6504	2SD637		3		C6502	ECCF1H470JU	Ceramic 50V	47P	1
					C6503	ECKF1H103ZF	Ceramic 50V	0.01	1
					C6504-6506	ECEA1CK100	Electrolytic 16V	10	3
					C6507	ECEA1HK4R7	Electrolytic 50V	4.7	1
					C6508,6509	ECEA1CK100	Electrolytic 16V	10	2
					C6510	ECEA1HK4R7	Electrolytic 50V	4.7	1
		Combination Circuit (Transistor & Resistor)			C6511	ECEA1HK010	Electrolytic 50V	1	1
QR6501,6502	DTC144A		2 or UN1213		C6512	ECEA1HKNR47	Electrolytic 50V	0.47	1
					C6513	ECEA0JK101	Electrolytic 6.3V	100	1
					C6514	VCYG1E104MR1	Semiconductor 25V	0.1	1
					C6515,6516	ECKF1H103ZF	Ceramic 50V	0.01	2
					C6517	ECEA1HK010	Electrolytic 50V	1	1
					C6518,6519	ECKF1H103ZF	Ceramic 50V	0.01	2
		Diodes							
D6501	LN81RCPHL	LED	1				Display Tubes		
D6502,6503	MA165		2		DP6502	VSL0031		1	
D6504	RD7.5EB3	Zener	1		DP6506	VSL0030		1	
D6506,6507	MA165		2						
D6508	MA165		1				Switches		
					S6502-6508	EVQQS307K		7	
					S6510-6513	EVQQS307K		4	
					S6514	ESD14307		1	

[illegible]

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
R7079,7080	ERES2TJ823	82K	2				Coils		
R7081,7082	ERDS2TJ102	1K	2		L7001	VLQEL05F102K	1mH	1	
R7089	ERDS2TJ473	47K	1		L7002	VTQ0016	36mH	1	
R7091	ERD2FCG220	Fuse Resistor	22	△	L7003,7004	VLQEL05F102K	1mH	2	
R7092	ERDS2TJ183	18K	1		L7010,7011	VTQ0014	10mH	2	
R7093,7094	ERDS2TJ103	10K	2						
R7095,7096	ERDS2TJ681	680	2						
							Transformers		
					T7001	EIR7QG001B		1	
					T7002,7003	EIS7E006B		2	
		Capacitors							
C7001	ECEA1CK470	Electrolytic 16V 47	1						
C7002	ECEA0JS471	Electrolytic 6.3V 470	1	or ECEA0JU471					
C7003	ECQB1H333JH	Mylar 50V 0.033	1						
C7004	ECQB1H822JH	Mylar 50V 8200P	1				Crystal Oscillators		
C7005	ECQB1H152JH	Mylar 50V 1500P	1		X7001,7002 *	EFCS5R5MS4		2	EFCS5R5MS4B
C7006	ECKF1H103ZF	Ceramic 50V 0.01	1		X7003,7004	EFCS5R74MS4B		2	
C7007	ECQB1H223JH	Mylar 50V 0.022	1		X7005,7006	ELB5A016		2	
C7008	ECEA1CK100	Electrolytic 16V 10	1						
C7009	ECEA1CS221	Electrolytic 16V 220	1	or ECEA1CU221					
C7010	ECEA1CK100	Electrolytic 16V 10	1						
C7011	ECEA0JK101	Electrolytic 6.3V 100	1				Connectors		
C7012,7013	ECEA1EK4R7	Electrolytic 25V 4.7	2		P7006	VJP1230	3P	1	
C7014,7015	ECKF1H103ZF	Ceramic 50V 0.01	2		P7007	VJP1232	5P	1	
C7016	ECEA1CK470	Electrolytic 16V 47	1						
C7017	ECEA1CU101	Electrolytic 16V 100	1						
C7018	ECQB1H273JH	Mylar 50V 0.027	1						
C7019	ECEA1HKR47	Electrolytic 50V 0.47	1						
C7020	ECEA1HK2R2	Electrolytic 50V 2.2	1						
C7021	ECEA1HK010	Electrolytic 50V 1	1						
C7022	ECEA1HK2R2	Electrolytic 50V 2.2	1						
C7023	ECEA1HKR47	Electrolytic 50V 0.47	1						
C7024	ECQB1H223JH	Mylar 50V 0.022	1			VEP07195A/B	Timer P.C. Board Unit		
C7025	ECEA1AS101	Electrolytic 10V 100	1	or ECEA1AU101					
C7026-7028	ECEA1CK100	Electrolytic 16V 10	3						
C7029	ECEA1EK4R7	Electrolytic 25V 4.7	1				Integrated Circuits		
C7030	ECQB1H183JH	Mylar 50V 0.018	1		IC7501	MN1455BVL		1	
C7031	ECQB1H152JH	Mylar 50V 1500P	1		IC7503	MN1512VTJ		1	
C7032	ECQB1H153JH	Mylar 50V 0.015	1		IC7504	MN1228		1	
C7033	ECQB1H152JH	Mylar 50V 1500P	1		IC7505	AN5033		1	
C7034	ECEA1EK4R7	Electrolytic 25V 4.7	1						
C7035,7036	ECKF1H102KB	Ceramic 50V 1000P	2						
C7037	ECEA50Z1	Electrolytic 50V 1	1						
C7038,7039	ECEA1CU101	Electrolytic 16V 100	2				Transistors		
C7040	ECKF1H102KB	Ceramic 50V 1000P	1		Q7501	2SB641		1	or 2SA564, 2SA733, 2SB642
C7041	ECKF1H103ZF	Ceramic 50V 0.01	1		Q7503	2SD636		1	or 2SC1684, 2SC945A, 2SD637
C7042	ECEA1CK470	Electrolytic 16V 47	1		Q7506	2SB641		1	or 2SA564, 2SA733, 2SB642
C7043	ECKF1H102KB	Ceramic 50V 1000P	1		Q7507,7508	2SB644		2	
C7044	ECCF1H120JC	Ceramic 50V 12P	1		Q7510	2SD637		1	or 2SC1685
C7045	ECKF1H102KB	Ceramic 50V 1000P	1		Q7511	2SB642		1	
C7046	ECKF1H103ZF	Ceramic 50V 0.01	1		Q7513-7515	2SB642		3	
C7047	ECCF1H120JC	Ceramic 50V 12P	1		Q7520	2SD636		1	or 2SC1684, 2SC945A, 2SD637
C7048	ECKF1H102KB	Ceramic 50V 1000P	1		Q7522	2SD636		1	or 2SC1684, 2SC945A, 2SD637
C7049	ECEA1CK470	Electrolytic 16V 47	1						
C7050	ECCF1H101JC	Ceramic 50V 100P	1						
C7051	ECEA1CK330	Electrolytic 16V 33	1						
C7052	ECEA1CK100	Electrolytic 16V 10	1						
C7053	ECQB1H223JH	Mylar 50V 0.022	1						
C7054	ECQB1H152JH	Mylar 50V 1500P	1						
C7055,7056	ECCF1H390JP	Ceramic 50V 39P	2						
C7057,7058	ECQB1H822JH	Mylar 50V 8200P	2						
C7091,7092	ECQB1H103JH	Mylar 50V 0.01	2						
							Combination Circuit (Transistor & Resistor)		
					QR7503	DTC144A		1	or UN1213
					QR7504	DTC114A		1	or UN1211 NV-850E/EG

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
					R7570,7571	ERDS2TJ332	3.3K	2	
					R7575	ERDS2TJ334	330K	1	NV-850E/EG
					R7576	ERDS2TJ223	22K	1	
					R7577	ERDS2TJ473	47K	1	
					R7579	ERDS2TJ473	47K	1	
		Diodes							
D7501,7502	MA165		2				Capacitors		
D7505	LN28WPVT	LED	1		C7501	ECCF1H080DC	Ceramic 50V 8P	1	
D7506,7507	10E2		2	or ERB1202G1	C7502	ECV1Z20X53T	Trimmer 500V 20P	1	
D7509	MA27WB		1		C7503	ECCF1H050CC	Ceramic 50V 5P	1	
D7510	LN28WPVT	LED	1		C7504	ECCF1H330JC	Ceramic 50V 33P	1	
D7520	MA165		1		C7505	ECCF1H220JC	Ceramic 50V 22P	1	
D7521	MA165		1	NV-850E/EG	C7506	ECKF1H103ZF	Ceramic 50V 0.01	1	
D7522	MA165		1		C7507,7508	ECEA1HKR22	Electrolytic 50V 0.22	2	
D7523	LN38GCPP	LED	1		C7510	ECEA1AK101	Electrolytic 10V 100	1	
D7550-7554	MA165		5		C7511	ECKF1H103ZF	Ceramic 50V 0.01	1	
D7561-7563	MA165		3		C7512	ECEA1HKR22	Electrolytic 50V 0.22	1	
D7574	MA165		1		C7513,7514	ECCF1H470J	Ceramic 50V 47P	2	
D7597	MA165		1	NV-850B	C7515	ECQV1H104JZ	Mylar 50V 0.1	1	
					C7516	ECQV1H683JZ	Mylar 50V 0.068	1	
					C7517	ECQV1H273JZ	Mylar 50V 0.027	1	or ECQBLH273JH
		Resistors			C7518	ECQV1H823JZ	Mylar 50V 0.082	1	
R7501	ERDS2TJ122		1.2K	1	C7519-7521	ECKF1H103ZF	Ceramic 50V 0.01	3	
R7502	ERC14GJ126	Solid	12M	1	C7522	ECEA1JS100	Electrolytic 63V 10	1	
R7503,7504	ERDS2TJ102		1K	2	C7523	ECEA1HK010	Electrolytic 50V 1	1	
R7505,7506	ERDS2TJ223		22K	2	C7524	ECKF1H103ZF	Ceramic 50V 0.01	1	
R7507	ERDS2TJ181		180	1	C7527	*ECEA1HK4R7	Electrolytic 50V 4.7	1	ECKF1HK4R7
R7508	ERDS2TJ334		330K	1	C7528	ECQV1H473JZ	Mylar 50V 0.047	1	
R7509	EVNK6AA00B25	Variable	200K	1	C7530	ECEA1HK010	Electrolytic 50V 1	1	
R7510	ERDS2TJ124		120K	1	C7531	ECEA1CK100	Electrolytic 16V 10	1	
R7511	ERDS2TJ154		150K	1	C7532	ECEA1HK010	Electrolytic 50V 1	1	
R7512	ERDS2TJ104		100K	1	C7533	ECKF1H103ZF	Ceramic 50V 0.01	1	
R7516	ERDS2TJ473		47K	1	C7540-7542	EECW2R3A3R3	Gold Capacitor 2.3V 3.3F	3	
R7517	ERDS2TJ221		220	1	C7543	ECEA1HK010	Electrolytic 50V 1	1	
R7518	ERDS2TJ105		1M	1	C7550	ECCF1H101J	Ceramic 50V 100P	1	
R7526	ERDS2TJ104		100K	1	C7553	ECKF1H103ZF	Ceramic 50V 0.01	1	
R7527	ERDS2TJ104		100K	1	C7554	ECKF1H103ZF	Ceramic 50V 0.01	1	
R7528	ERDS2TJ103		10K	1	C7555	ECQV1H104JZ	Mylar 50V 0.1	1	
R7529	ERDS2TJ473		47K	1					
R7530	ERDS2TJ104		100K	1			Coil		
R7531	ERDS2TJ124		120K	1	L7501	VLQEL05F102K	1mH	1	
R7532	ERDS2TJ122		1.2K	1					
R7533	EWEU2A016B24	Variable	20K	1					
R7534	ERDS2TJ271		270	1					
R7535	EVNK6AA00B14	Variable	10K	1					
R7536	ERDS2TJ103		10K	1			Crystal Oscillators		
R7537	ERDS2TJ473		47K	1	X7501	VSX0071		1	
R7539	ERDS2TJ390		39	1	X7502	VSX0094		1	
R7540	ERDS2TJ820		82	1	X7503	VSX0082		1	
R7541	ERDS2TJ153		15K	1					
R7542	ERDS2TJ473		47K	1					
R7546	ERDS2TJ273		27K	1					
R7547	ERDS2TJ104		100K	1			Switches		
R7548	ERDS2TJ472		4.7K	1	SW7516	VES0213		1	
R7549	ERDS2TJ104		100K	1	SW7517	ESD14137A		1	or VSS0050 NV-850E/EG
R7550	ERDS2TJ391		390	1	SW7518	EVQQS05G		1	
R7551-7556	ERDS2TJ273		27K	6	SW7519,7520	EVQQS05G		2	NV-850E/EG
R7557-7559	ERDS2TJ473		47K	3					
R7560	ERDS2TJ222		2.2K	1					
R7561	ERDS2TJ332		3.3K	1					
R7562	ERDS2TJ223		22K	1			Connectors		
R7567	ERDS2TJ223		22K	1	P7501	VJPI237	10P	1	
R7568	ERDS2TJ332		3.3K	1	P7503	VJPI235	8P	1	
					P7505	VJPI229	2P	1	

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks	
R4568	EVN61AA00B15	Variable	100K	1	R4650,4651	ERDS2TJ473	47K	2		
R4570	ERDS2TJ103		10K	1	R4652	ERDS2TJ104	100K	1		
R4571	ERDS2TJ122		1.2K	1	R4654	ERDS2TJ472	4.7K	1		
R4572	EVNKOAA00B23	Variable	2K	1	R4655,4656	ERDS2TJ182	1.8K	2		
R4573	ERDS2TJ151		150	1	R4657	ERDS2TJ103	10K	1		
R4574	ERDS2TJ153		15K	1	R4659	ERDS2TJ473	47K	1		
R4575	ERDS2TJ472		4.7K	1	R4661	ERDS2TJ104	100K	1		
R4576	ERDS2TJ562		5.6K	1	R4662	ERDS2TJ102	1K	1		
R4577	ERDS2TJ563		56K	1	R4663-4666	ERDS2TJ223	22K	4		
R4578	ERDS2TJ562		5.6K	1	R4667,4668	ERDS2TJ102	1K	2		
R4579	ERDS2TJ473		47K	1	R4669	ERDS2TJ473	47K	1		
R4580,4581	ERDS2TJ333		33K	2	R4670	ERDS2TJ474	470K	1		
R4582	ERDS2TJ473		47K	1	R4671	ERDS2TJ561	560	1		
R4583	ERDS2TJ563		56K	1	R4672	ERDS2TJ102	1K	1		
R4584	ERDS2TJ392		3.9K	1			Capacitors			
R4585	ERDS2TJ472		4.7K	1	C4501	ECEA1CK100	Electrolytic 16V	10	1	
R4586	EVNKOAA00B13	Variable	1K	1	C4502,4503	ECEA1EK3R3	Electrolytic 25V	3.3	2	
R4587	ERDS2TJ103		10K	1	C4504	ECCF1H101JC	Ceramic 50V	100P	1	
R4590	ERDS2TJ104		100K	1	C4505	ECEA1CK100	Electrolytic 16V	10	1	
R4591	* ERDS2TJ472		4.7K	1	ERDS2TK472	C4506	ECKF1H103ZF	Ceramic 50V	0.01	1
R4592	ERDS2TJ104		100K	1	C4507	ECCF1H820JC	Ceramic 50V	82P	1	
R4593	EVNKOAA00B25	Variable	200K	1	C4508,4509	ECCF1H680JC	Ceramic 50V	68P	2	
R4594	ERDS2TJ332		3.3K	1	C4511,4512	ECKF1H103ZF	Ceramic 50V	0.01	2	
R4595	ERDS2TJ333		33K	1	C4513	ECEA1CK100	Electrolytic 16V	10	1	
R4596	ERDS2TJ682		6.8K	1	C4514	ECEA1CK220	Electrolytic 16V	22	1	
R4597	EVN38CA00B23	Variable	2K	1	C4515	* ECEA1CKN100	Electrolytic 16V	10	1	
R4598	ERDS2TJ272		2.7K	1	C4516	ECQB1H103KH	Mylar 50V	0.01	1	
R4600	ERDS2TJ102		1K	1	C4517	ECEA1CK100	Electrolytic 16V	10	1	
R4603,4604	ERDS2TJ104		100K	2	C4518	ECKF1H221KB	Ceramic 50V	220P	1	
R4605-4607	ERDS2TJ102		1K	3	C4519	ECKF1H331KB	Ceramic 50V	330P	1	
R4610	ERDS2TJ272		2.7K	1	C4520	ECEA1CK100	Electrolytic 16V	10	1	
R4612	EVN61AA00B53	Variable	5K	1	C4521	ECKF1H103ZF	Ceramic 50V	0.01	1	
R4613	ERDS2TJ103		10K	1	C4522,4523	ECEA1CK100	Electrolytic 16V	10	2	
R4614	ERDS2TJ223		22K	1	C4526,4527	ECEA1CK100	Electrolytic 16V	10	2	
R4615	ERDS2TJ330		33	1	C4533	* ECEA25M3R3	Electrolytic 25V	3.3	1	
R4616	ERDS2TJ222		2.2K	1	C4534	ECQB1H223JH	Mylar 50V	0.022	1	
R4617	ERDS2TJ102		1K	1	C4535	ECEA1CK100	Electrolytic 16V	10	1	
R4618	ERDS2TJ391		390	1	C4537	ECEA25M3R3	Electrolytic 25V	3.3	1	
R4619	ERDS2TJ821		820	1	C4538	ECQB1H123JH	Mylar 50V	0.012	1	
R4620,4621	ERDS2TJ220		22	2	C4539	ECEA1CK470	Electrolytic 16V	47	1	
R4622	ERDS2TJ152		1.5K	1	C4540,4541	ECEA1CK100	Electrolytic 16V	10	2	
R4623	ERDS2TJ223		22K	1	C4542	* ECEA10M100	Electrolytic 10V	100	1	
R4624	ERDS2TJ332		3.3K	1	C4543	ECQB1H472JH	Mylar 50V	4700P	1	
R4625,4626	ERDS2TJ100		10	2	C4544	* ECKF1H331K	Ceramic 50V	330P	1	
R4627	ERDS2TJ332		3.3K	1	C4545	ECQB1H123JH	Mylar 50V	0.012	1	
R4628,4629	ERDS2TJ101		100	2	C4546,4547	ECEA1CK100	Electrolytic 16V	10	2	
R4630	ERDS2TJ222		2.2K	1	C4548,4549	ECEA1CK330	Electrolytic 16V	33	2	
R4631	ERDS2TJ152		1.5K	1	C4550	ECCF1H330KC	Ceramic 50V	33P	1	
R4632,4633	ERDS2TJ222		2.2K	2	C4551	ECEA1CK100	Electrolytic 16V	10	1	
R4634	ERDS2TJ182		1.8K	1	C4552	ECQB1H103JH	Mylar 50V	0.01	1	
R4635	ERDS2TJ222		2.2K	1	C4553	* ECEA1AK330	Electrolytic 10V	33	1	
R4636	ERDS2TJ102		1K	1	C4555	* ECEA1CK100	Electrolytic 16V	10	1	
R4637	ERDS2TJ182		1.8K	1	C4556	* ECEA1CK330	Electrolytic 16V	33	1	
R4638	ERDS2TJ222		2.2K	1	C4557	ECCF1H330KC	Ceramic 50V	33P	1	
R4639	ERDS2TJ102		1K	1	C4558	ECEA25M3R3	Electrolytic 25V	3.3	1	
R4641	ERDS2TJ103		10K	1	C4560	ECQB1H123JH	Mylar 50V	0.012	1	
R4642	ERDS2TJ473		47K	1	C4561	ECEA1CK100	Electrolytic 16V	10	1	
R4643	ERDS2TJ101		100	1	C4568	ECEA25M3R3	Electrolytic 25V	3.3	1	
R4644	ERDS2TJ103		10K	1	C4569	ECEA1CK100	Electrolytic 16V	10	1	
R4645	ERDS2TJ102		1K	1	C4570	ECQB1H223JH	Mylar 50V	0.022	1	
R4646	ERDS2TJ103		10K	1	C4571	ECEA1CK100	Electrolytic 16V	10	1	
R4647	ERDS2TJ822		8.2K	1	C4572	* ECEA10M100	Electrolytic 10V	100	1	
R4648	ERDS2TJ153		15K	1	C4573	ECQB1H472JH	Mylar 50V	4700P	1	
R4649	ERDS2TJ333		33K	1	C4574	ECKF1H331KB	Ceramic 50V	330P	1	

[illegible]

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
QR4301	DTA114A		1		R4380	ERDS2TJ333	33K	1	
QR4302-4305	DTC144A		4		R4381	ERDS2TJ154	150K	1	
QR4306	DTC124A		1	or UN1212	R4382,4383	ERDS2TJ473	47K	2	
					R4385-4387	*ERDS2TJ473	47K	3	ERDS2T473
					R4388-4392	ERDS2TJ333	33K	5	
					R4394	ERDS2TJ391	390	1	
		Diodes			R4395	FRDS2TJ471	470	1	
D4301-4304	MA165		4		R4396	ERDS2TJ391	390	1	
D4307-4317	MA165		11		R4397	ERDS2TJ471	470	1	
					R4398	ERDS2TJ333	33K	1	
					R4399	ERDS2TJ223	22K	1	
					R4400	ERDS2TJ333	33K	1	
		Resistors			R4401	ERDS2TJ223	22K	1	
R4301-4303	ERDS2TJ104	100K	3		R4402-4407	ERDS2TJ474	470K	6	
R4304	ERDS2TJ223	22K	1		R4408	ERDS2TJ473	47K	1	
R4305	ERDS2TJ123	12K	1		R4409	ERDS2TJ103	10K	1	
R4306	ERDS2TJ223	22K	1		R4410,4411	ERDS2TJ223	22K	2	
R4307	ERDS2TJ123	12K	1		R4412	ERDS2TJ102	1K	1	
R4308	ERDS2TJ124	120K	1		R4413,4414	ERDS2TJ223	22K	2	
R4309	ERDS2TJ184	180K	1		R4416	ERDS2TJ104	100K	1	
R4310	ERDS2TJ472	4.7K	1						
R4311	ERDS2TJ124	120K	1				Capacitors		
R4312	FRDS2TJ184	180K	1		C4301-4306	ECEA1HK010	Electrolytic 50V	1	6
R4313	ERDS2TJ472	4.7K	1		C4307-4309	ECEA1CK100	Electrolytic 16V	10	3
R4314,4315	ERDS2TJ223	22K	2		C4310	ECEA1AK330	Electrolytic 10V	33	1
R4317	ERDS2TJ151	150	1		C4311	ECEA1CK100	Electrolytic 16V	10	1
R4318	ERDS2TJ181	180	1		C4312	ECEA1CK101	Electrolytic 16V	100	1
R4319	ERDS2TJ394	390K	1		C4313	ECEA1CK100	Electrolytic 16V	10	1
R4320	ERDS2TJ332	3.3K	1		C4314	ECEA1AK330	Electrolytic 10V	33	1
R4323	ERDS2TJ223	22K	1		C4315	ECEA1CK100	Electrolytic 16V	10	1
R4325	ERDS2TJ151	150	1		C4316,4317	ECEA1HK010	Electrolytic 50V	1	2
R4326	ERDS2TJ181	180	1		C4318	ECEA1CK101	Electrolytic 16V	100	1
R4327	ERDS2TJ332	3.3K	1		C4319,4320	ECKF1H103ZF	Ceramic 50V 0.01	2	
R4328	ERDS2TJ394	390K	1		C4321,4322	ECEA1CK470	Electrolytic 16V	47	2
R4329	EVNKOAA00B55	Variable	500K	1	C4323	ECEA1CK100	Electrolytic 16V	10	1
R4330,4331	ERDS2TJ104	100K	2		C4324	ECEA1AU221	Electrolytic 10V	220	1
R4332,4333	ERDS2TJ224	220K	2		C4325,4326	ECEA1CK100	Electrolytic 16V	10	2
R4334,4335	ERDS2TJ472	4.7K	2		C4327	ECEA1CK470	Electrolytic 16V	47	1
R4336	ERDS2TJ273	27K	1		C4328	ECEA1EK100	Electrolytic 25V	10	1
R4338	ERDS2TJ473	47K	1		C4329-4331	ECEA1CK100	Electrolytic 16V	10	3
R4339	ERDS2TJ474	470K	1		C4332	ECEA1CU221	Electrolytic 16V	220	1
R4340-4342	ERDS2TJ473	47K	3		C4333,4334	ECEA1AK470	Electrolytic 10V	47	2
R4343	ERDS2TJ223	22K	1		C4335,4336	ECEA1HK0R1	Electrolytic 50V 0.1	2	
R4344	ERDS2TJ103	10K	1		C4337	ECEA1CK101	Electrolytic 16V	100	1
					C4338-4341	*ECEA1CK100	Electrolytic 16V	10	4
R4349,4350	ERDS2TJ823	82K	2						ECEA1CKDOBJ
R4351,4352	ERDS2TJ103	10K	2		C4343,4344	ECEA1CK100	Electrolytic 16V	10	2
R4353,4354	ERDS2TJ473	47K	2		C4345,4346	ECEA1HK3R3	Electrolytic 50V 3.3	2	
R4355	ERDS2TJ223	22K	1						
R4356	ERDS2TJ221	220	1						
R4357,4358	ERDS2TJ223	22K	2				Connectors		
R4360,4361	ERDS2TJ104	100K	2		P4301	VJP1245	5P	1	
R4362	ERDS2TJ222	2.2K	1		P4303	VJP1245	5P	1	
R4363	ERDS2TJ332	3.3K	1		P4305	VJP1245	5P	1	
R4364	ERDS2TJ222	2.2K	1		P4307	VJP1247	7P	1	
R4365	ERDS2TJ332	3.3K	1		P4308	VJP1243	3P	1	
R4366	ERQ14AJ330	Metal 33	1		P4309	VJP1245	5P	1	
R4367,4368	ERDS2TJ224	220K	2		P4310,4311	VJP1243	3P	2	
R4370,4371	ERDS2TJ101	100	2						
R4372	ERDS2TJ103	10K	1						
R4374	ERDS2TJ104	100K	1						
R4375	ERDS2TJ154	150K	1						
R4377	ERDS2TJ104	100K	1						
R4379	ERDS2TJ334	330K	1						

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
	VJB00A53	Reel Sensor P.C. Board		
IC1501	ON2160	Photo Interrupter	1	
	VMX0645	Sensor Spacer	1	
	VJB00A54	Loading Motor Connection P.C. Board		
		Capacitor		
C1504	VCYF1C333MR	Semiconductor 16V 0.033	1	
		Connectors		
P1512	VJP1246		6P 1	
P1513	VJP1242		2P 1	
P1514	VJP1229		2P 1	
P1515	VJP1242		2P 1	
	VJB00A55	Front Connection P.C. Board		
		Connectors		
P1508	VJP1246		6P 1	
P1509	VJP1242		2P 1	
P1510	VJP1244		4P 1	
P1511	VJP1243		3P 1	
	VJB00A56	Takeup Photo Transistor P.C. Board		
		Transistor		
Q6552	PN150NV	Photo Transistor	1	
	VMD0091	Transistor Holder	1	
	VJB00A82	Front Loading Motor Connection P.C. Board		
		Capacitor		
C1503	ECKF1H102KB	Ceramic 50V 1000P	1	
		Switches		
	VSM0046		2	Cassette Up/Down SW
	VSM0047		1	Cassette In SW

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
		Connector		
P1507	VJP1248		8P 1	
	VJB00A94	Supply Photo Transistor P.C. Board		
		Transistor		
Q1502	PN150NV	Photo Transistor	1	
		Capacitor		
C1502	ECKF1H102KB	Ceramic 50V 1000P	1	
	VMD0091	Transistor Holder	1	
	VJB00A98	Rear Jack P.C. Board		
		Resistors		
R1401	ERDS2TJ560		56 1	
R1402	ERDS2TJ271		270 1	NV-850I/EG
R1402	ERDS2TJ101		100 1	NV-850I
R1403	ERDS2TJ560		56 1	
R1404	ERDS2TJ271		270 1	NV-850I/EG
R1404	ERDS2TJ101		100 1	NV-850I
R1405,1406	ERDS2TJ101		100 2	NV-850I/EG
		Capacitors		
C1401,1402	ECKF1H222KB	Ceramic 50V 2200P	2	
		Switches		
S1401	ESD14130		1	
S1402	ESD14161		1	NV-850I/EG
S1402	ESD14130		1	NV-850I
		Connectors		
P3001	VJP1242		2P 1	
P3002	VJP1243		3P 1	
P3003	VJP1244		4P 1	
P3004	VJP1243		3P 1	NV-850I/EG
P4302	VJP1244		4P 1	NV-850I/EG
P4304	VJP1246		6P 1	
P4306	VJP1243		3P 1	
P4401	VJP1243		3P 1	
		Miscellaneous		
	XTV3+8G	Screw	3	

Ref. No.	Part No.	Part Name & Description	Pcs / Set	Remarks
		Fuses		
F1101	XBA2C05TR0C	500mA	1	△
F1102,1103	XBA2C16TR0C	1.6A	2	△
		Connectors		
P1001	VJP1231	4P	1	
P1002	VJP1230	3P	1	
P1003	VJP1141	2P	1	
P1004	VJP1231	4P	1	
P7502	VJP1234	7P	1	
		Miscellaneous		
	VJF0052	Binder	1	
	VMX0237	AC Cord Cover	1	△
	VGH0079	Power Name Plate	1	
	VJA0111	AC Cord	1	NV-850E/EG △
	VJA0112	AC Cord	1	NV-850B △
	VMP0371	Transformer Angle	1	△
	VJF0107	Bushing	1	△
	SJT777	AC Cord Clamp Pin	2	△
	TJC6320	Fuse Holder	6	△
	* ———	Spacer	1	VQL322 (Not available)
	* VEP00C08	IR Remote Control Transmitter P.C. Board		VJB00C08
		Integrated Circuit		
IC1	MN6030B		1	
		Transistor		
Q1	2SD1458		1	
		Diodes		
D1	LN66	LED	1	or SE303A
D3	MA154WK		1	
		Resistors		
R1	ERDS2TJ102	1K	1	
R2	ERDS2TJ473	47K	1	
R3	ERDS2TJ1R0	1	1	
		Capacitors		
C1	ECKF1H471KB	Ceramic 50V 470P	1	
C2	ECKF1H121KB	Ceramic 50V 120P	1	
C3	ECEA0JK101	Electrolytic 6.3V 100	1	
		Crystal Oscillator		
X1	CSB420PB1		1	or EPOK420K05F1
		Switch		
SW1	ESD14126		1	

Panasonic
MATSUSHITA ELECTRIC

Service Manual

Effective From: VEP06190B1 C4HK.....(AG-6200/6100)
 C4HL.....(AG-6800)
 VEP02181A/B/C .. D4HK00001(AG-6200/6100)
 D4HL00001(AG-6800)

VHS Video Cassette Recorder
 Model No. AG-6200/6100-E/B/A/EN
 AG-6800-E/B/A/EN

Supplement

Subject: Change of the System Control C.B.A. and Servo C.B.A.

Please use this manual together with the Service Manual for Model No. AG-6200/6100 and AG-6800
 Order No. VRD-8309-484(AG-6200/6100-E/B/A/EN), VRD-8312-499(AG-6800-E/B/A/EN)

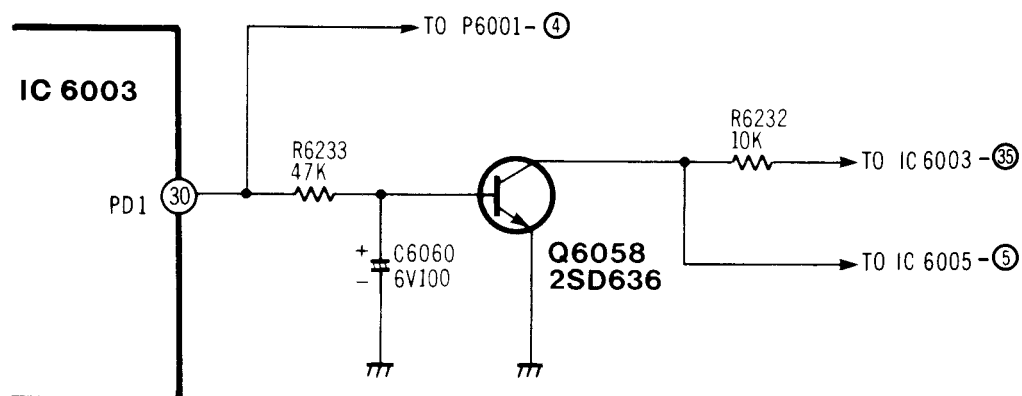
The System Control circuit board and Servo circuit board of Models AG-6200/6100/6800-E/B/A/EN have been modified to improve reliability.

The parts tentatively put on the foil side of the System Control and Servo circuit boards will be installed onto the component side. Since the early type C.B.A. is compatible with the new type C.B.A., the board numbers have not been changed.

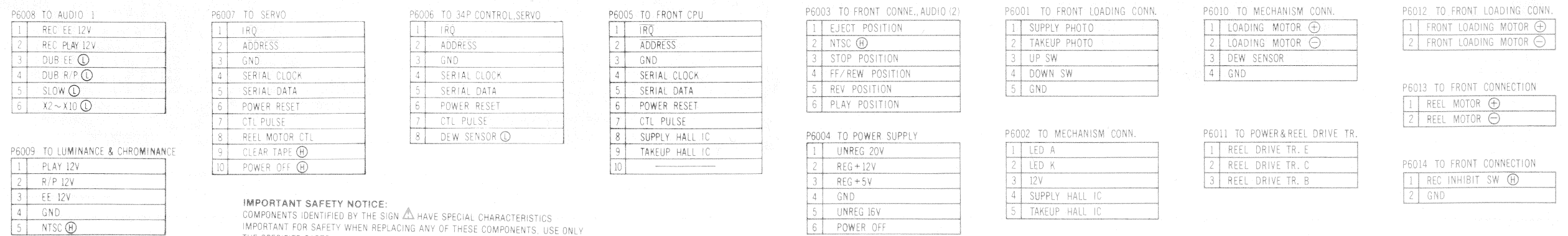
However, following countermeasures have been introduced to the new System Control C.B.A. (VEP06190B1).

- * When the Play Key is pressed immediately after the cassette tape is inserted, the tape may sub-load before cassette down is completed.

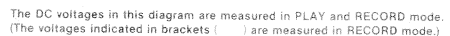
To prevent this, the System Control Circuit has been changed as shown below.

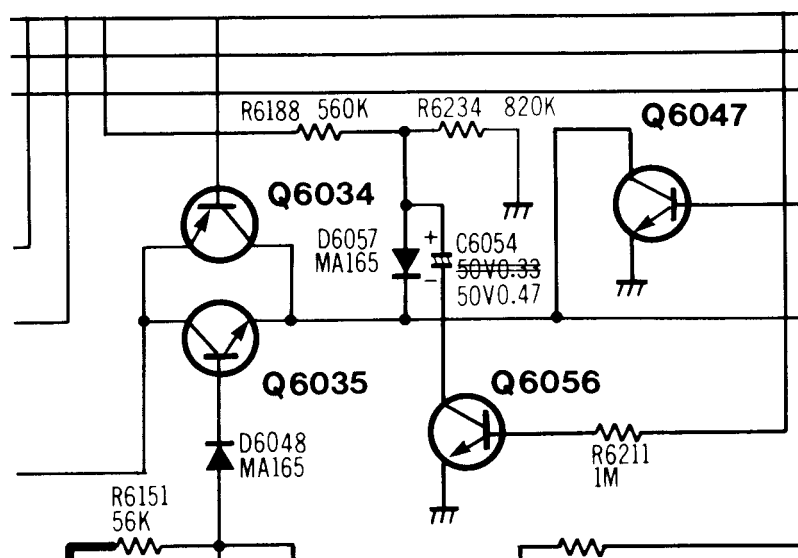


A
B
C
D
E



IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN  HAVE SPECIAL CHARACTERISTICS
IMPORTANT FOR SAFETY WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY
THE SPECIFIED PARTS.





[System Control C.B.A. (VEP06190B1)]

Part Number			
Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions
Q6508	-----	2SD636	[System Control C.B.A.(VEP06190B1)] Transistor
C6054	ECEA1HKR33	ECEA1HSR47	Capacitor (50V 0.33 → 50V 0.47)
C6060	-----	ECEA0JS101	Capacitor (6V 100)
R6232	-----	ERDS2TJ103	Resistor (10KΩ)
R6233	-----	ERDS2TJ473	Resistor (47KΩ)
R6234	-----	ERDS2TJ824	Resistor (820KΩ)
R2366	ERDS2TJ103	ERDS2TJ333	[Servo C.B.A.(VEP02181A/B/C)] Resistor (33KΩ)